
Chapter IX

MATERIALS CONSUMED

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The 1947 Census of Manufactures obtained consumption data for about 150 materials, for one-third of which the statistics approximate total manufacturing consumption. The information obtained consists of the quantities, and usually the corresponding values, of the specified materials that were consumed (put into production) by manufacturing establishments during 1947. These statistics which were tabulated according to consuming industries are shown in the individual industry reports.

This chapter contains a recapitulation of the consumption data by industry for 61 materials, and in addition, shows consumption by geographic division and State for many of these materials. Most of the 61 materials included are those for which the data shown represent total manufacturing consumption. The criteria governing the inclusion of a material for complete coverage in the census are listed in the section of the introductory text entitled "Specific Materials Consumed."

In this chapter, the materials consumed data by industry and geographic area are arranged according to broad groups of industries which represent two-digit Standard Industrial Classification industry groupings or combinations thereof. The text preceding each industry area discusses the proportion of total manufacturing consumption represented by the 1947 census consumption data for each material and, where consumption outside manufacturing is significant, points out that fact and describes the principal nonmanufacturing areas of consumption. In addition, definitions of the material or other explanatory statements are included in several of the texts.

With a few exceptions that are noted in the individual texts that follow, the consumption data shown represent the total consumption by establishments classified in the specified industry, rather than the

total consumption in the manufacture of the products defined by the industry title. That is, all of the metal consumed by an establishment classified in the machine tool industry is included in that industry, even though some of the metal may have been consumed in the manufacture of products other than machine tools, such as conveyors, oil burners, etc. In the appendix to this volume entitled "Industry Description," data are shown on the proportion that shipments of the primary products of an industry are of the total shipments of the industry and also the proportion of shipments of those primary products by all industries accounted for by the industry in which the products are primary.

In a number of industries, very small establishments (generally with one or two employees) were permitted to submit only general statistics in the census and, therefore, did not supply data on the consumption of selected materials. For almost all such industries, these small establishments accounted for less than five percent of the value added by manufacture for the industry, and usually the figure was only one or two percent.

In publishing the geographic data for materials consumed, preference has been given to the nine Census divisions (New England, Middle Atlantic, etc.) over the individual States whenever it was necessary to withhold figures in order to avoid disclosing information for individual companies. In the tables on consumption by industry, combinations of industries and sometimes materials have been made for the same reason. Any comparison of the quantities consumed for the several chemicals with available supply, should take into consideration exports, imports, and changes in stocks, as well as the volume of production.

FOOD AND KINDRED PRODUCTS

Livestock.—Data on livestock do not include livestock slaughtered in nonmanufacturing establishments such as retail butcher shops, food locker plants, other establishments servicing consumers rather than the trade, and farms. The census covered the following percentages of the total number of animals slaughtered in 1947 as estimated by the U. S. Department of Agriculture: cattle, 82 percent; calves, 74 percent; sheep and lambs, 92 percent, and hogs, 69 percent.

Raw and refined sugar and sugar beets.—Data on consumption of raw cane sugar represent total industrial consumption, except for the amount refined by beverage base and confectionery manufacturers for their own use (less than 1 percent of the total).

Total industrial consumption of sugar beets in the United States is shown in table 3.

Data for refined cane and beet sugar represent 90 to 95 percent of total industrial consumption; the balance representing relatively small quantities used in meat products, breakfast cereals, flour mixes, desserts, frozen eggs, sirup mixtures, liquors, tobacco products, and in retail bakeries. Industrial consumption during 1947 amounted to about 45 percent of the total apparent domestic consumption of 6,600,000 tons.

Corn, wheat, and wheat flour.—Data for corn represent total industrial consumption, except for small quantities (less than 1 percent), used in industrial alcohol and vinegar plants. Industrial consumption during 1947 amounted to 14 percent of the total domestic disappearance of 2,665 million bushels.

Data for wheat represent total consumption in flour, feed, and cereal mills, excluding custom mills. Small quantities (less than 1 percent of total industrial consumption) also were consumed in alcohol manufacture in 1947. Industrial consumption of wheat during 1947 amounted to about 77 percent of the total domestic disappearance of 943 million bushels, the remainder being used for farm feed and seed.

Data for wheat flour represent practically all industrial consumption, not including small amounts consumed in making adhesives, glutamate, and other products. (The amount used in making flour mixes is not considered as industrial consumption and is not included in these figures.) Estimated consumption by retail bakeries not covered in the Census of Manufactures and by bakeries which were covered but which were unable to report flour consumption, is included. Industrial uses accounted for 67 percent of the 198 million sacks of wheat flour available for domestic consumption in 1947.

TABLE 1.—LIVESTOCK SLAUGHTERED: 1947.

[Weight and cost figures in thousands]

PRODUCT	Number	Live weight (pounds)	Delivered cost	Chilled dressed weight (pounds)
Livestock slaughtered by the meat packing, wholesale, industry:				
Cattle.....	18,260,251	16,427,945	\$2,986,313	8,501,108
Calves.....	10,170,309	2,084,603	400,419	1,177,249
Sheep and lambs.....	17,253,990	1,622,543	320,309	742,905
Hogs.....	51,678,047	12,930,703	3,154,899	9,089,433

TABLE 2.—LIVESTOCK SLAUGHTERED, BY DIVISIONS AND STATES: 1947

[Weight and cost figures in thousands]

DIVISION AND STATE	Cattle				Calves			
	Number	Live weight (pounds)	Delivered cost	Chilled dressed weight (pounds)	Number	Live weight (pounds)	Delivered cost	Chilled dressed weight (pounds)
United States	18,260,251	16,427,945	\$2,966,313	8,591,108	10,170,309	2,084,603	\$400,419	1,177,249
New England	242,657	229,606	37,392	111,596	274,816	24,689	4,259	13,691
Maine.....	8,502	6,705	1,277	3,446	3,095	479	98	277
New Hampshire.....	56,086	54,076	7,612	25,530	11,128	833	151	514
Vermont.....	7,122	5,948	694	2,722	34,021	2,287	262	1,159
Massachusetts.....	102,808	100,068	18,293	50,119	198,167	18,031	3,286	10,114
Rhode Island.....	20,940	19,395	3,350	10,056	17,099	1,951	307	1,082
Connecticut.....	47,199	43,414	6,166	19,723	11,306	1,008	155	545
Middle Atlantic	1,268,407	1,236,865	246,422	651,578	1,262,547	199,293	44,660	114,040
New York.....	522,294	489,317	104,151	262,914	650,021	103,456	23,057	59,291
New Jersey.....	210,239	210,689	45,592	116,299	193,009	37,781	9,485	22,201
Pennsylvania.....	535,874	526,859	96,679	272,365	419,517	58,056	12,118	32,548
East North Central	4,297,832	3,896,552	724,295	2,048,853	2,870,921	436,212	90,888	257,100
Ohio.....	819,404	731,632	146,062	392,296	223,929	38,018	8,336	21,410
Indiana.....	514,616	438,820	77,693	226,930	154,883	32,068	7,065	18,703
Illinois.....	1,834,446	1,656,933	321,528	888,553	1,002,762	170,734	33,433	96,847
Michigan.....	578,728	510,540	92,355	262,106	440,258	76,121	16,907	45,636
Wisconsin.....	550,638	558,627	86,657	278,968	1,049,089	119,221	25,147	74,504
West North Central	6,373,205	5,915,844	1,105,026	3,139,715	2,381,481	561,917	95,143	277,712
Minnesota.....	1,249,651	1,209,844	202,230	622,470	800,831	122,190	24,260	70,242
Iowa.....	1,414,048	1,349,205	263,415	727,134	474,320	89,017	18,228	49,621
Missouri.....	875,203	740,291	142,196	394,661	439,861	103,884	19,084	55,689
North Dakota.....	101,811	100,594	15,835	51,783	(d)	(d)	(d)	(d)
South Dakota.....	216,206	204,995	36,717	107,916	(d)	(d)	(d)	(d)
Nebraska.....	1,259,604	1,186,985	239,606	647,475	83,217	26,139	4,395	13,731
Kansas.....	1,256,682	1,123,930	205,027	588,276	488,559	135,498	24,616	74,798
South Atlantic	807,981	618,601	95,625	300,554	528,482	106,865	18,665	58,081
Delaware.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Maryland.....	169,967	163,845	30,460	83,207	98,898	15,714	3,307	8,556
District of Columbia.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Virginia.....	84,973	69,590	12,018	35,318	79,753	16,163	3,467	9,141
West Virginia.....	30,408	25,397	4,320	12,399	12,005	2,192	471	1,206
North Carolina.....	39,320	36,354	5,392	16,421	42,567	7,751	1,436	4,731
South Carolina.....	42,887	30,826	4,276	14,867	14,673	2,971	405	1,150
Georgia.....	271,352	176,306	23,610	82,233	160,106	37,372	5,365	20,051
Florida.....	161,781	108,828	14,285	52,433	76,938	17,383	2,330	8,775
East South Central	680,098	498,963	78,211	243,773	565,960	115,039	21,808	62,391
Kentucky.....	194,481	159,541	28,272	82,977	134,240	25,588	5,966	15,458
Tennessee.....	269,054	195,963	29,148	93,912	314,370	56,945	10,419	30,510
Alabama.....	166,140	108,771	15,704	51,237	91,574	24,412	3,840	12,270
Mississippi.....	50,423	34,688	5,087	15,647	25,796	8,094	1,583	4,153
West South Central	1,779,372	1,378,174	196,838	672,424	1,463,906	491,165	80,973	272,647
Arkansas.....	46,786	36,190	5,902	17,600	(d)	(d)	(d)	(d)
Louisiana.....	185,704	127,686	18,064	62,560	197,552	55,805	9,459	28,725
Oklahoma.....	357,909	289,333	43,406	141,421	(d)	(d)	(d)	(d)
Texas.....	1,188,973	924,985	131,466	450,843	1,003,451	349,883	59,972	191,552
Mountain	762,627	698,934	136,611	376,084	128,331	39,536	7,581	22,209
Montana.....	44,046	41,653	7,500	22,228	10,565	3,327	624	1,922
Idaho.....	50,614	47,524	9,016	25,377	7,569	2,418	434	1,335
Wyoming.....	16,180	14,816	2,045	8,052	622	180	32	96
Colorado.....	435,578	402,472	82,244	221,857	64,260	19,498	3,725	10,731
New Mexico.....	24,599	17,255	2,906	8,237	1,360	527	92	291
Arizona.....	53,444	46,387	8,971	25,286	11,698	4,608	923	2,560
Utah.....	111,193	100,901	18,292	50,526	26,542	6,963	1,357	4,002
Nevada.....	26,973	27,921	5,737	14,521	5,715	2,015	394	1,272
Pacific	2,048,072	1,964,406	363,893	1,046,531	693,845	169,887	36,442	99,378
Washington.....	357,952	315,505	56,939	169,798	67,926	20,013	3,986	11,714
Oregon.....	138,422	130,781	22,020	67,122	25,826	7,438	1,492	4,235
California.....	1,551,698	1,518,120	284,934	809,611	600,093	142,436	30,964	83,429

See footnote at end of table.

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TABLE 2.—LIVESTOCK SLAUGHTERED, BY DIVISIONS AND STATES: 1947—Continued

DIVISION AND STATE	Sheep and lambs				Hogs			
	Number	Live weight (pounds)	Delivered cost	Chilled dressed weight (pounds)	Number	Live weight (pounds)	Delivered cost	Chilled dressed weight (pounds)
United States	17,253,990	1,622,543	\$320,309	742,905	51,678,047	12,930,703	\$3,154,899	9,089,433
New England	352,887	32,424	6,345	14,206	852,473	223,322	54,513	166,343
Maine.....	479	43	6	21	21,027	5,576	1,380	4,164
New Hampshire.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Vermont.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Massachusetts.....	(d)	(d)	(d)	(d)	624,342	165,767	40,262	123,812
Rhode Island.....	388	30	6	16	(d)	(d)	(d)	(d)
Connecticut.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Middle Atlantic	2,538,898	232,124	53,209	104,491	4,041,160	874,906	223,580	585,009
New York.....	1,585,795	145,056	32,708	65,246	1,491,893	301,922	77,800	208,505
New Jersey.....	752,934	68,508	16,671	81,066	726,376	151,304	38,441	107,673
Pennsylvania.....	200,169	18,560	3,830	8,179	1,822,891	421,680	107,339	288,831
East North Central	2,130,884	199,958	36,397	92,951	14,288,120	3,605,839	869,616	2,541,981
Ohio.....	143,029	13,077	2,640	6,391	2,292,992	528,272	132,834	380,438
Indiana.....	79,556	7,195	1,428	3,381	2,755,859	689,377	166,103	479,506
Illinois.....	1,402,124	133,737	25,625	61,906	5,797,086	1,526,250	363,519	1,066,424
Michigan.....	299,312	26,016	3,483	12,163	1,080,953	254,311	61,887	180,026
Wisconsin.....	206,863	19,833	3,221	9,110	2,361,220	607,629	145,273	435,587
West North Central	7,300,759	701,933	136,977	325,019	23,266,771	6,087,850	1,485,696	4,313,137
Minnesota.....	1,129,008	109,055	21,332	50,168	4,659,097	1,251,556	295,263	880,318
Iowa.....	1,922,575	183,401	37,232	84,682	8,451,781	2,154,393	545,819	1,586,273
Missouri.....	(d)	(d)	(d)	(d)	2,981,668	746,416	181,383	524,669
North Dakota.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
South Dakota.....	326,862	31,684	6,128	14,625	(d)	(d)	(d)	(d)
Nebraska.....	1,285,602	127,565	25,442	59,678	2,340,691	652,274	154,710	451,421
Kansas.....	1,351,296	126,602	23,832	58,198	2,927,419	751,563	184,606	504,464
South Atlantic	91,051	8,690	1,719	4,303	2,855,991	612,671	144,196	426,903
Delaware.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Maryland.....	47,483	4,207	823	1,841	722,930	160,403	41,139	114,616
District of Columbia.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Virginia.....	19,014	1,641	326	983	631,038	134,900	32,036	91,206
West Virginia.....	2,459	240	51	116	(d)	(d)	(d)	(d)
North Carolina.....	792	72	13	32	137,806	37,662	8,478	26,809
South Carolina.....	(d)	(d)	(d)	(d)	181,519	34,707	8,136	23,314
Georgia.....	1,854	153	24	75	863,785	175,867	40,436	122,975
Florida.....	(d)	(d)	(d)	(d)	150,017	27,198	5,612	18,777
East South Central	153,293	12,834	2,286	5,929	1,395,310	309,442	74,681	217,116
Kentucky.....	(d)	(d)	(d)	(d)	395,531	89,432	22,730	62,778
Tennessee.....	51,966	4,206	754	2,042	682,416	147,851	36,015	103,146
Alabama.....	808	65	11	32	267,978	61,685	13,483	43,761
Mississippi.....	(d)	(d)	(d)	(d)	49,385	10,474	2,453	7,431
West South Central	1,281,224	103,849	15,843	47,297	1,822,078	417,946	101,097	290,079
Arkansas.....	(d)	(d)	(d)	(d)	71,089	16,617	3,556	11,602
Louisiana.....	872	59	6	28	52,385	10,323	2,411	7,354
Oklahoma.....	(d)	(d)	(d)	(d)	545,430	126,791	30,567	85,878
Texas.....	(d)	(d)	(d)	(d)	1,153,174	264,215	64,563	185,245
Mountain	849,224	83,470	16,627	30,285	971,365	246,058	60,433	166,478
Montana.....	5,209	514	92	250	118,556	28,767	7,142	19,379
Idaho.....	13,363	1,383	254	687	61,514	14,367	3,376	10,065
Wyoming.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Colorado.....	728,261	71,294	14,475	24,568	554,792	147,485	35,764	100,913
New Mexico.....	6,064	508	91	248	16,304	3,037	697	2,211
Arizona.....	13,957	1,294	285	624	37,685	8,563	2,280	5,788
Utah.....	78,197	8,063	1,360	3,705	164,223	39,513	10,085	25,008
Nevada.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Pacific	2,555,770	247,261	50,906	118,424	2,184,779	552,669	141,087	382,387
Washington.....	(d)	(d)	(d)	(d)	471,221	113,692	28,681	77,538
Oregon.....	(d)	(d)	(d)	(d)	239,811	57,914	14,772	42,080
California.....	2,182,919	210,646	43,764	101,101	1,473,747	381,063	97,634	262,769

^d Withheld to avoid disclosing figures for individual companies.

CENSUS OF MANUFACTURES: 1947

TABLE 3.—RAW AND REFINED SUGAR AND SUGAR BEETS CONSUMED, BY INDUSTRY: 1947

[All figures in thousands]

INDUSTRY	Refined cane and beet sugar		Raw cane sugar		Sugar beets	
	Quantity (pounds)	Delivered cost	Quantity (short tons)	Delivered cost	Quantity (short tons)	Delivered cost
United States.....	5,539,729	\$467,799	5,543	\$689,808	12,245	\$168,269
Cane sugar refining.....			5,543	689,808		
Beet sugar.....					12,245	168,269
Concentrated milk.....	229,838	18,298				
Ice cream and ices.....	242,090	10,993				
Other dairy products.....	164,180	15,501				
Canning and preserving, except fish.....	813,406	67,594				
Pickles and sauces.....	155,829	13,379				
Frozen foods.....	39,676	3,304				
Bread and other bakery products.....	900,575	77,084				
Biscuit, crackers, and pretzels.....	238,521	20,820				
Confectionery products.....	809,808	69,620				
Chocolate and cocoa products.....	336,711	27,921				
Chewing gum.....	116,417	9,658				
Bottled soft drinks.....	800,787	68,484				
Flavorings.....	691,891	56,233				

TABLE 4.—RAW AND REFINED SUGAR AND SUGAR BEETS CONSUMED, BY DIVISIONS AND STATES: 1947

[All figures in thousands]

DIVISION AND STATE	Refined cane and beet sugar		Raw cane sugar		Sugar beets	
	Quantity (pounds)	Delivered cost	Quantity (short tons)	Delivered cost	Quantity (short tons)	Delivered cost
United States.....	5,539,729	\$467,799	5,543	\$689,808	12,245	\$168,269
New England.....	338,726	28,681	(d)	(d)		
Maine.....	18,708	1,574				
New Hampshire.....	4,811	418				
Vermont.....	8,444	862				
Massachusetts.....	251,787	21,164	(d)	(d)		
Rhode Island.....	18,275	1,528				
Connecticut.....	36,701	3,095				
Middle Atlantic.....	1,466,915	123,770	2,136	265,708		
New York.....	707,014	60,554	(d)	(d)		
New Jersey.....	282,688	21,495				
Pennsylvania.....	497,213	41,721	(d)	(d)		
East North Central.....	1,457,135	123,251	30	3,887	778	11,470
Ohio.....	220,227	19,477			(d)	(d)
Indiana.....	127,708	10,931	(d)	(d)		
Illinois.....	667,261	56,284	(d)	(d)		
Michigan.....	247,004	20,622			(d)	573
Wisconsin.....	194,935	15,937	(d)	(d)		(d)
West North Central.....	366,516	32,101			1,330	18,376
Minnesota.....	75,488	6,664			(d)	(d)
Iowa.....	44,629	4,152			(d)	(d)
Missouri.....	177,716	15,126				
North Dakota.....	5,594	489				
South Dakota.....	6,312	543			(d)	(d)
Nebraska.....	21,887	1,071			(d)	(d)
Kansas.....	34,892	3,156			(d)	(d)
South Atlantic.....	591,067	49,495	(d)	(d)		
Delaware.....	7,005	571				
Maryland.....	138,281	11,432	(d)	(d)		
District of Columbia.....	18,649	1,541				
Virginia.....	78,816	6,624				
West Virginia.....	31,625	2,640				
North Carolina.....	67,027	5,982				
South Carolina.....	25,627	2,186				
Georgia.....	150,790	12,392	(d)	(d)		
Florida.....	73,497	6,127				
East South Central.....	192,503	16,635				
Kentucky.....	44,786	3,900				
Tennessee.....	70,337	6,105				
Alabama.....	50,624	4,407				
Mississippi.....	26,566	2,223				
West South Central.....	336,752	28,646	1,418	176,779		
Arkansas.....	26,286	2,263				
Louisiana.....	85,516	7,033	(d)	(d)		
Oklahoma.....	29,548	2,620				
Texas.....	195,402	16,730	(d)	(d)		
Mountain.....	73,301	6,621			6,324	86,635
Montana.....	6,599	642			908	13,106
Idaho.....	6,067	555			(d)	(d)
Wyoming.....	1,658	94			(d)	(d)
Colorado.....	26,478	2,395			2,649	37,398
New Mexico.....	4,771	453				
Arizona.....	7,143	622				
Utah.....	19,667	1,782			731	8,983
Nevada.....	918	78				
Pacific.....	716,814	58,649	764	96,016	3,813	51,788
Washington.....	90,337	7,871			(d)	(d)
Oregon.....	70,488	5,886			(d)	(d)
California.....	555,989	44,892	764	96,016	(d)	(d)

d Withheld to avoid disclosing figures for individual companies.

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TABLE 5.—CORN, WHEAT, AND WHEAT FLOUR CONSUMED, BY INDUSTRY: 1947

[All figures in thousands]

INDUSTRY	Corn ¹		Wheat ¹		Percent estimated ²	Wheat flour	
	Quantity (bu.)	Delivered cost	Quantity (bu.)	Delivered cost		Quantity (cwt.)	Delivered cost
United States ³	377,356	\$736,673	723,459	\$1,755,057	20	131,702	\$775,874
Flour and meal	52,588	102,803	673,308	1,629,316			
Prepared animal feeds	137,503	292,337	41,384	103,530			
Cereal preparations	14,176	27,292	8,767	22,211			
Distilled liquors	33,264	60,604	(⁴)	(⁴)			
Corn products	139,825	253,637					
Bakery products					21	123,364	725,592
Macaroni and noodles					4	8,338	50,282

¹ Data represent consumption of corn and wheat in establishments which reported detailed consumption statistics in the census. Such establishments accounted for 97 percent of the total production of the industries represented. For individual States, their proportion of total production varied from 90 percent to 100 percent.

² Data include estimated consumption of flour in establishments which did not report detailed statistics, and in retail single-outlet bakeries not included in the census. The figures headed "Percent estimated" represent the proportion of the total which was estimated.

³ Data represent total industrial consumption, except as indicated in text and footnotes.

⁴ A small amount of wheat was consumed by this industry, but no data were collected in the census.

TABLE 6.—CORN, WHEAT, AND WHEAT FLOUR CONSUMED, BY DIVISIONS AND STATES: 1947

[All figures in thousands]

DIVISION AND STATE	Corn		Wheat		Percent estimated	Wheat flour	
	Quantity (bu.)	Delivered cost	Quantity (bu.)	Delivered cost		Quantity (cwt.)	Cost
United States	377,356	\$736,673	723,459	\$1,755,057	20	131,702	\$775,874
New England	6,449	14,284	1,672	4,407	19	9,082	55,259
Maine	(^d)	(^d)	(^d)	(^d)	10	675	3,965
New Hampshire	(^d)	(^d)	(^d)	(^d)	23	379	2,307
Vermont	(^d)	(^d)	598	1,577	21	242	1,451
Massachusetts	1,496	3,239	415	1,143	18	5,239	31,481
Rhode Island					17	796	4,944
Connecticut	1,025	2,199	231	561	23	1,751	11,111
Middle Atlantic	36,641	77,678	87,704	227,426	21	34,817	210,406
New York	23,050	48,438	77,840	202,213	22	17,404	104,251
New Jersey	2,379	5,375	2,279	6,423	33	5,871	36,016
Pennsylvania	11,212	23,865	7,585	18,790	14	11,542	70,139
East North Central	171,364	320,355	88,954	218,989	20	29,855	171,603
Ohio	16,861	35,384	22,719	54,885	16	8,784	51,212
Indiana	30,567	58,246	11,441	28,573	18	13,311	19,241
Illinois	107,687	193,694	35,744	87,600	23	9,059	50,638
Michigan	7,193	15,030	13,308	33,471	22	5,725	33,225
Wisconsin	9,056	18,001	5,742	14,460	29	12,599	15,033
West North Central	76,545	143,806	308,043	743,231	22	13,429	75,697
Minnesota	3,670	7,384	90,856	229,643	30	12,399	14,034
Iowa	40,361	75,128	9,877	24,474	26	2,435	13,418
Missouri	24,430	45,182	60,862	147,195	14	4,928	27,683
North Dakota	191	364	11,042	28,002	30	468	2,778
South Dakota	409	734	1,057	2,217		(²)	(²)
Nebraska	3,820	7,267	17,397	41,702	17	1,173	6,719
Kansas	3,664	7,767	116,952	269,998	25	1,202	6,504
South Atlantic	20,413	42,020	25,460	66,018	16	12,635	76,171
Delaware	(^d)	(^d)	140	339	19	375	2,376
Maryland	(^d)	(^d)	3,370	8,771	21	12,030	12,307
District of Columbia	(^d)	(^d)	(^d)	(^d)	9	1,037	6,182
Virginia	3,428	7,795	(^d)	(^d)	17	1,689	10,194
West Virginia	1,470	2,614	832	2,044	9	1,310	7,974
North Carolina	3,645	7,626	7,130	18,991	12	1,621	9,873
South Carolina	830	1,940	1,003	2,691	14	682	4,203
Georgia	3,046	6,443	2,533	6,674	10	12,069	11,844
Florida	(²)	(²)	173	455	28	1,754	10,809
East South Central	33,032	67,051	25,058	62,637	13	5,338	31,236
Kentucky	17,503	33,265	9,286	23,229	17	1,349	18,027
Tennessee	7,494	16,037	13,463	33,606	10	12,092	11,793
Alabama	5,273	11,432	2,023	5,111	13	1,987	15,858
Mississippi	2,762	6,317	286	691	17	659	3,815
West South Central	16,874	34,890	84,454	195,610	21	9,560	53,662
Arkansas	3,430	6,924	107	264	17	730	3,971
Louisiana	2,716	5,241	90	184	23	1,974	11,579
Oklahoma	2,668	6,233	30,824	68,381	26	1,410	7,623
Texas	8,060	16,492	53,433	126,781	19	5,446	30,489
Mountain	2,115	4,671	37,377	84,191	24	3,841	22,341
Montana	87	193	9,812	21,363		(²)	(²)
Idaho	174	377	5,254	11,550		(²)	(²)
Wyoming	(^d)	(^d)	(^d)	(^d)	(^d)	(²)	(²)
Colorado	1,030	2,129	(^d)	(^d)	(^d)	1,303	17,168
New Mexico	(^d)	(^d)	385	934		(²)	(²)
Arizona	145	355	506	1,130	23	466	2,808
Utah	629	1,491	8,459	20,100	22	598	3,403
Nevada						(²)	(²)
Pacific	13,923	31,918	64,737	152,548	23	13,095	79,499
Washington	1,782	4,354	29,259	68,502		1,953	11,501
Oregon	1,032	2,376	17,640	39,166	23	1,391	8,201
California	11,109	25,188	17,838	44,880	23	9,751	59,797

^d Withheld to avoid disclosing figures for individual companies.

¹ Consumption in bakeries only. Consumption by macaroni manufacturers in these States is included in regional totals.

² Not shown because the amount of estimation required was more than 30 percent of the total.

³ Not shown because establishments reporting detailed statistics accounted for less than 90 percent of total production for the State.

PAPER AND ALLIED PRODUCTS

Pulpwood.—Data on the quantity and cost of pulpwood consumed by the pulp mill industry represents 100 percent coverage of this commodity.

Wood pulp.—Consumption data for wood pulp shown in table 7 account for approximately 99 percent of the total supply. The distribution of these data by States (table 8), however, has been limited to the use of wood pulp by the Paper and Board Industry in order to avoid disclosing operations of individual companies in the other industries. The Paper and Board Industry accounts for 96.5 percent of the total annual supply of wood pulp.

Data on the cost of wood pulp consumed are not available. Information on the value of shipments of wood pulp was reported separately for interplant transfers and other shipments (see census pamphlet MC-26A). Since approximately 80 percent of all wood pulp produced is consumed by the producing company, and the value of these transfers closely approximates the cost of these materials to the consuming mills, cost data were not collected.

Paper and board.—The data on the consumption of paper and board shown in table 7 are exclusive of building paper and board grades, and account for approximately 82 percent of the total available supply. The 1947 domestic production of building paper and board amounted to 2,629,008 short tons. Of this total, 1,208,108 tons were transferred to plants affiliated with the producing paper mill for further fabrication into roofing, siding, and floor covering materials, and 819,084 tons of insulating materials in finished form were distributed directly through the regular building material channels.

It was not considered feasible to collect cost information on a uniform basis for all major consuming industries from which consumption data were collected, because of the various customs of billing for materials used in some of the printing and publishing industries. For example, printers often do not furnish an itemized statement of the cost of materials to the publisher, and consequently the publisher from whom the paper consumption information was requested, could not report cost of the paper.

The consumption statistics for the printing and publishing industries included in this table represent the amount of paper consumed in publishing newspapers, periodicals, books, greeting cards, and miscellaneous publishing; in commercial printing, lithographing, and engraving; and in the manufacture of

blankbooks and loose-leaf products without regard to the industry classification of the reporting establishments. For more detailed information, see Census of Manufactures Pamphlets MC-27A, Newspapers, Periodicals, and Books, and MC-27B, Commercial Printing, Greeting Cards, Bookbinding and Related Industries.

In table 8, Consumption of Selected Materials by States, it was necessary to assign the paper consumption data reported by the periodical and book publishing industries to the State in which the publisher was located. However, these data do not necessarily represent the States in which the paper was actually consumed since the publishers often have this printing done by printers located in other States. It is believed that this limitation does not seriously affect the usefulness of these data as the magazine, periodical, and book publishing industries accounted for less than 15 percent of the total reported consumption of paper. For more detailed information on the consumption of paper in the printing of magazines, periodicals, and books by States, see the Census of Manufactures Pamphlet MC-27A, Newspapers, Periodicals, and Books.

The classification of paper and board used in the collection of consumption data from paper and board products manufacturers differs from that used in collecting paper consumption statistics from printers and publishers. Therefore, with the exception of newsprint, the grade detail shown for these two groups are not additive.

These data contain a relatively small amount of duplication. This duplication arises from the fact that the product of one paper consuming industry may be the material of another industry. For example, establishments engaged in coating paper consumed 324,894 tons of paper (base stock) in producing 364,665 tons of coated paper. This coated paper is reported as a material consumed by other industries, such as the printing and publishing industries, and, therefore, the weight of the base stock before coating enters twice into these consumption figures. This duplication does not arise in the case of coated paper which is coated as part of the primary paper making process. There is also a small amount of duplication in the consumption of waxed paper. However, it is believed that the amount of duplication contained in these figures is less than 2.5 percent of the total.

TABLE 7.—PULP, PAPER, AND BOARD CONSUMED, BY INDUSTRY: 1947

MATERIAL AND INDUSTRY		Quantity						
Pulpwood (cords, 128 cu. ft.):								
Pulp mills ¹		19,345,311						
Wood pulp (short tons, air dry), total		13,841,084						
Paper and board		13,285,435						
Synthetic fibers		399,447						
Plastics materials		108,592						
Paper and board products		47,610						

INDUSTRY	Total	Type of paper and board, except building (short tons)						
		Newsprint	Groundwood	Book	Fine	Coarse, special industrial, and absorbent	Sanitary and tissue	Board (except building)
Paper and board products industries, total	12,308,935	18,331	205,157	574,265	166,026	2,148,123	920,850	8,276,183
Coated and glazed paper	873,912	623	34,807	284,317	5,614	422,708	56,349	69,494
Envelopes	258,734	(d)	5,802	140,731	31,503	72,751	(d)	(d)
Paper bags	1,210,606	(d)	(d)	(d)	2,399	1,177,479	(d)	(d)
Paperboard box and container	7,149,193	3,292	14,629	45,322	5,161	45,306	(d)	17,030,180
Fiber cans, tubes, drums, etc.	231,039	(d)	(d)	400	(d)	(d)	(d)	226,926
Die-cut paper and board	160,813	(d)	1,663	2,645	20,631	34,086	(d)	100,721
Wallpaper	127,783	(d)	128,623	(d)	(d)	(d)	(d)	(d)
Miscellaneous paper and board products ²	2,296,855	14,023	21,394	99,281	100,607	391,189	820,745	839,616

PRODUCT	Total	Type of paper and board, except building (short tons)						
		Newsprint	Uncoated groundwood	Uncoated book	Fine	All other uncoated paper	All coated paper	Paper, not specified by type ⁴
Printing and publishing, total ⁵	7,445,030	4,571,479	429,063	1,093,714	401,044	149,968	672,642	127,120
Newspapers	4,162,848	4,162,848						
Magazines and periodicals	1,405,769	238,095	229,047	507,201	4,806	8,639	417,981	
Books	251,634	7,387	33,769	176,575	9,558	5,183	19,162	
Miscellaneous publishing	92,820	63,766	2,969	11,057	10,243	2,662	2,123	
Greeting cards	34,812		531	7,677	20,639	5,391	574	
Commercial printing, lithographing, etc.	1,497,147	99,383	162,747	391,204	355,798	128,093	232,802	127,120

⁴ Withheld to avoid disclosing figures for individual companies.

¹ Cost of pulpwood consumed, \$344,959,000.

² Container board, 4,690,139 tons; bending board, 1,847,823 tons; nonbending board, 475,762 tons; and miscellaneous boards, 26,456 tons.

³ Includes small quantity of paper and board used in the manufacture of paper and board products by establishments classified in other industries (textile bags, etc.).

⁴ In addition, there were 18,139 tons of paper consumed in the "Carbon paper and inked ribbons" industry.

⁵ Represents the amount of paper consumed in publishing newspapers, periodicals, books, greeting cards, and miscellaneous publishing; in commercial printing, lithographing, and engraving; and in the manufacture of blankbooks and loose-leaf products without regard to the industry classification of the reporting establishments.

CENSUS OF MANUFACTURES: 1947

TABLE 8.—PULP, PAPER, AND BOARD CONSUMED, BY DIVISIONS AND STATES: 1947

[Money figures in thousands of dollars]

DIVISION AND STATE	Pulpwood		Wood pulp ¹ (short tons— air dry)	Paper and board, except building (short tons)			
	Quantity (cords, 128 cu. ft.)	Cost		Total ²	Newsprint ²	Paper, except newsprint and building ²	Board, except building
United States.....	19,345,311	\$344,959	13,285,435	19,772,104	4,589,810	6,906,111	8,276,183
New England.....	2,300,805	53,447	1,938,947	1,716,817	298,270	716,859	703,688
Maine.....	1,860,525	42,243	1,240,266	114,417	13,083	99,261	2,073
New Hampshire.....	351,216	8,716	199,246	82,856	4,448	72,207	6,201
Vermont.....			95,320	70,076	2,869	58,726	8,480
Massachusetts.....			342,425	1,095,093	208,128	392,890	494,076
Rhode Island.....	89,064	2,488	61,600	56,032	21,391	14,859	19,782
Connecticut.....				300,344	48,351	78,916	173,077
Middle Atlantic.....	1,431,319	37,761	2,011,045	6,588,262	1,549,197	2,587,976	2,451,089
New York.....	884,025	24,807	1,127,647	3,807,717	1,047,546	1,065,061	1,094,210
New Jersey.....	70,057	937	265,419	943,571	79,063	220,918	643,590
Pennsylvania.....	477,237	12,017	617,979	1,836,974	422,588	701,097	713,289
East North Central.....	2,134,374	48,801	2,308,508	5,745,460	1,048,143	1,837,378	2,859,939
Ohio.....	1,131,447	2,175	483,243	1,535,707	246,810	503,105	785,792
Indiana.....			40,171	507,422	100,869	77,611	328,942
Illinois.....	(d)	(d)	140,166	1,816,491	407,822	588,935	810,734
Michigan.....	398,153	9,298	589,623	1,012,313	200,098	226,834	570,381
Wisconsin.....	1,004,774	37,328	1,055,305	873,527	83,544	440,893	349,090
West North Central.....	580,504	10,621	509,382	1,215,053	378,977	289,235	546,841
Minnesota.....	580,504	10,621		313,881	96,886	73,617	143,378
Iowa.....				178,779	60,233	48,818	69,728
Missouri.....				487,202	118,856	132,794	235,552
North Dakota.....			509,382	6,167	5,508	(d)	(d)
South Dakota.....				43,242	41,922	(d)	(d)
Nebraska.....				54,435	28,288	13,568	12,579
Kansas.....				131,847	27,284	18,535	85,528
South Atlantic.....	5,289,734	78,543	2,643,515	1,500,249	405,394	450,796	644,059
Delaware.....			19,675	21,351	5,438	(d)	(d)
Maryland.....	(d)	(d)		244,066	73,734	40,016	130,316
District of Columbia.....			101,912	114,320	83,710	(d)	(d)
Virginia.....	994,868	12,221	644,191	218,524	41,165	94,560	82,799
West Virginia.....			3,151	110,920	23,071	34,985	52,804
North Carolina.....	889,128	12,761	336,821	138,133	43,213	11,074	83,846
South Carolina.....	(d)	(d)		150,582	13,886	3,064	133,632
Georgia.....	2,079,439	32,038	1,082,623	344,086	53,431	210,553	80,102
Florida.....	1,326,299	21,523	655,142	158,267	67,746	10,608	79,013
East South Central.....	1,474,971	19,274	985,704	556,830	144,325	279,735	132,770
Kentucky.....				91,069	35,409	25,027	30,543
Tennessee.....				178,568	61,679	44,613	72,266
Alabama.....	830,698	10,694	383,423	268,995	38,824	207,621	22,560
Mississippi.....	644,273	8,680	475,101	18,208	8,323	2,474	7,411
West South Central.....	2,755,897	38,914	1,480,742	894,326	258,984	313,905	321,437
Arkansas.....	848,746	11,898	351,640	108,619	14,751	86,222	7,646
Louisiana.....	1,907,151	27,016	1,129,102	376,835	50,415	163,656	162,764
Oklahoma.....				85,454	36,833	8,645	39,976
Texas.....	(d)	(d)	(d)	323,418	156,985	55,382	111,051
Mountain.....				122,498	78,523	19,088	24,882
Montana.....				6,300	5,392	(d)	(d)
Idaho.....				5,400	4,463	(d)	(d)
Wyoming.....				2,199	1,792	(d)	(d)
Colorado.....				62,677	36,782	8,263	17,632
New Mexico.....				3,285	2,514	(d)	(d)
Arizona.....				13,166	11,009	(d)	(d)
Utah.....				26,759	14,647	5,102	7,010
Nevada.....				2,622	1,929	(d)	(d)
Pacific.....	3,377,707	57,598	1,207,592	1,430,609	427,992	411,139	591,478
Washington.....	2,755,152	45,457	745,833	300,901	50,679	123,209	127,103
Oregon.....	606,841	11,887	387,704	94,076	26,511	53,350	14,209
California.....	15,714	254	74,055	1,035,542	350,802	234,574	450,167

¹ Withheld to avoid disclosing figures for individual companies.² Represents data on the consumption in the manufacture of paper and board only. Data on the use of wood pulp by other industries (see table 7) withheld to avoid disclosing figures for individual companies.³ Data on the consumption of paper by the magazine, periodical, and book publishing industries, included in this tabulation, are distributed according to the location of the publisher. See text for explanation.⁴ Includes data for Illinois.⁵ Includes data for Maryland and South Carolina.⁶ Includes data for Texas.

CHEMICALS, CRUDE PETROLEUM, AND RUBBER

Chemicals.—Consumption data for the chemicals listed below were collected only for those industries known to use the great bulk of these materials in manufacturing. Therefore, the totals contained in this table do not represent total United States consumption. For example, the 1.3 million tons shown for sodium hydroxide (caustic soda) are estimated to be only about 60 percent of the total "disappearance," since information for this chemical was secured only from establishments producing organic and inorganic chemicals, soap and cleaning preparations, pulp, paper, and paperboard, and refining petroleum. No data were gathered from plants classified in the textile industries, rubber reclaiming, refining of vegetable oils, or other industries.

In making any comparison of the quantity consumed with supply for the several chemicals, account should be taken of the factors discussed in the general introduction to the materials consumption tables. In addition, consideration should be given to the variation in handling consumption data for inorganic chemicals produced and consumed in the same establishment. Since the production and consumption data collected for certain inorganic chemicals included quantities which were subsequently used in producing other physical modifications of the specified chemicals, adjustments were made so that the consumption data shown below do not reflect these amounts. Any "disappearance" calculations for a given inorganic chemical, such as chlorine, also should take into account that the apparent total supplies published by the Census Bureau include quantities used in the converting process described above.

In some instances, data are shown for a group of

industries rather than for a specific industry because the published data might disclose the operations of individual companies, or because plants classified in one industry produce appreciable quantities of products classified in other industries. For example, some establishments classified in the Soap and Glycerin Industry (2841) ship a considerable volume of synthetic organic detergents which are classified in the Cleaning and Polishing Preparations Industry (2842). Consumption data for these two industries are shown as a combined figure rather than for each industry separately.

Crude petroleum.—The figures for crude petroleum represent consumption at petroleum refineries only. However, petroleum refineries account for practically all the United States consumption of crude petroleum.

Rubber.—Consumption data shown in table 9 for rubber are limited to the quantities of natural, synthetic (chemical), and reclaimed rubber consumed by the establishments classified in the specified industries. This table does not show the total United States rubber consumption for all industries, estimates of which are prepared by the Rubber Division, United States Office of Domestic Commerce. Based on the 1947 figures released by this agency, the establishments classified in the industries shown here used approximately 93 percent of the total new rubber and about 88 percent of the total reclaimed consumed in the United States, or about 92 percent of all the rubber consumed. Additional detail showing quantities of rubber consumed by kind and by broad classes of products are shown in Volume II, Reports for Industries, "Rubber Products Industries," table 7.

TABLE 9.—CHEMICALS, CRUDE PETROLEUM, AND RUBBER CONSUMED BY SPECIFIED INDUSTRIES: 1947
[Money figures in thousands of dollars]

INDUSTRY	Inorganic chemicals							
	Ammonia 100% NH ₃ (short tons)	Chlorine (short tons)	Hydro- chloric acid 100% HCl (short tons)	Nitric acid 100% HNO ₃ (short tons)	Sodium sulfate (salt cake) crude (short tons)	Sodium carbonate (soda ash) 98-100% Na ₂ CO ₃ (short tons)	Sodium hydroxide (caustic soda) 100% NaOH (short tons)	Sulfuric acid 100% H ₂ SO ₄ (short tons)
Total.....	773, 187	1, 215, 102	330, 523	1, 313, 664	760, 748	3, 845, 853	1, 524, 748	7, 302, 057
Alkalies and chlorine.....	666, 908	90, 219	77, 168	855, 961	58, 062	1, 948, 150	193, 485	1, 162, 595
Inorganic chemicals, n.e.c.....								
Cyclic (coal-tar) crudes.....	106, 219	877, 922	253, 355	447, 703		42, 887	579, 726	1, 559, 485
Organic chemicals, n.e.c.....								
Plastics materials.....								
Explosives.....								
Synthetic fibers.....								
Synthetic rubber.....								
Soap and glycerin.....						156, 559	242, 309	
Cleaning and polishing preparations.....								
Fertilizers.....								
Fertilizers (mixing only).....								3, 390, 451
Flat glass.....								
Glass containers.....								
Pressed and blown glassware, n.e.c.....					83, 639	1, 438, 810		
Products of purchased glass.....								
Petroleum products.....							149, 283	1, 180, 526
Pulp mills.....		246, 961			619, 047	259, 447	160, 006	
Paper and board mills.....								

TABLE 9.—CHEMICALS, CRUDE PETROLEUM, AND RUBBER CONSUMED BY SPECIFIED INDUSTRIES: 1947—Continued

INDUSTRY	Organic chemicals						Crude petroleum		
	Aniline 100% (M pounds)	Acetic anhydride 100% (short tons)	Benzene 100% (M gallons)	Formal- dehyde 37% by wt. (M pounds)	Phenol 100% (M pounds)	Styrene 100% (short tons)	Total quantity, domestic and foreign (M barrels)	Domestic only	
								Quantity (M barrels)	Cost (delivered at refineries)
Total	68,324	352,788	108,533	480,413	220,694	232,197	1,887,890	1,789,920	\$3,841,040
Alkalies and chlorine.....	591	41,040	5,368	3,785	552				
Inorganic chemicals, n.e.c.....									
Cyclic (coal-tar) crudes.....	67,733	65,384	97,847	173,273	55,501				
Organic chemicals, n.e.c.....				294,639	148,962	124,544			
Plastics materials.....									
Synthetic fibers.....		240,364							
Synthetic rubber.....						107,653			
Plastics products, n.e.c.....				8,716	7,786				
Petroleum products.....			5,318		7,893		1,887,890	1,789,920	3,841,040

INDUSTRY	Rubber							
	Total		Natural rubber		Synthetic rubber		Reclaimed rubber	
	Quantity (long tons)	Cost ¹	Quantity (long tons)	Cost	Quantity (long tons)	Cost	Quantity (long tons)	Cost ¹
Total	1,298,854	\$520,638	533,512	\$259,438	511,275	\$228,648	254,067	\$33,552
Tires and tubes.....	924,253	381,380	415,837	197,384	390,237	169,197	118,179	14,799
Rubber footwear.....	36,463	15,034	20,134	10,270	7,406	3,499	8,923	1,265
Reclaimed rubber.....								
Rubber industries, n.e.c.....	338,138	124,224	97,541	50,784	113,632	55,952	126,965	17,488

¹ Excludes costs for reclaimed rubber made and consumed in the same plant.

TABLE 10.—CHEMICALS, CRUDE PETROLEUM, AND RUBBER CONSUMED BY SPECIFIED INDUSTRIES, FOR DIVISIONS AND STATES: 1947

[Money figures in thousands of dollars]

DIVISION AND STATE	Inorganic chemicals							
	Ammonia 100% NH ₃ (short tons)	Chlorine (short tons)	Hydrochloric acid 100% HCl (short tons)	Nitric acid 100% HNO ₃ (short tons)	Sodium sulfate (salt cake) crude (short tons)	Sodium carbonate (soda ash) 98-100% Na ₂ CO ₃ (short tons)	Sodium hydroxide (caustic soda) 100% NaOH (short tons)	Sulfuric acid 100% H ₂ SO ₄ (short tons)
United States	773,187	1,215,102	330,523	1,313,664	1,760,748	1,345,853	1,324,748	7,302,057
New England ¹	46,942	17,029	7,065	11,488	19,365	41,524	86,643	136,495
Maine.....		11,009			(d)	10,177	7,610	(d)
Massachusetts.....	(d)	3,476	1,049	(d)	(d)	16,184	24,385	74,059
Connecticut.....	(d)	696	(d)	(d)		723	(d)	6,315
Rhode Island.....		(d)	(d)		(d)	14,210	34,067	(d)
Middle Atlantic ²		184,841	59,840	360,442	45,189	954,942	261,462	978,696
New York.....	33,620	135,022	11,363	31,439	1,548	447,611	93,612	155,327
New Jersey.....	11,144	27,062	46,733	312,779	25,732	197,161	93,369	542,684
Pennsylvania.....	(d)	22,757	1,744	16,224	17,909	310,170	74,481	280,685
North Central ³	254,350	329,240	96,104	615,211	93,745	1,477,455	440,398	1,593,305
Ohio.....	152,673	38,424	(d)	428,306	13,143	627,005	123,219	398,620
Indiana.....		50			2,790	150,620	86,290	139,489
Illinois.....	(d)	32,449	23,592	14,604	16,645	238,810	142,182	560,900
Missouri.....		(d)	(d)	(d)	6,881	45,967	(d)	315,159
Michigan.....	(d)	225,497	52,607	864	17,098	383,612	44,934	99,271
Wisconsin.....		30,637	(d)	(d)	27,683	4,794	5,554	22,296
Minnesota.....		682			2,247	2,247	4,035	(d)
Kansas.....	(d)	48	(d)	(d)	10,505	23,813	16,221	32,302
South Atlantic ⁴	269,083	306,811	13,374	1,152	341,269	753,685	310,778	2,517,477
Maryland.....	(d)	5,537	658		199	41,869	23,305	501,679
Virginia.....	(d)	(d)	(d)		61,443	391,462	142,464	447,479
West Virginia.....	77,583	268,577	10,030	1,009	21,540	265,691	72,940	221,190
North Carolina.....		17,113		(d)	62,793	8,832	34,046	268,698
South Carolina.....		10,814	(d)	(d)	58,809	16,359	(d)	229,133
Georgia.....		9,380			53,096	784	15,040	334,702
Florida.....		2,887	(d)	(d)	73,942	5,666	13,213	321,534
East South Central ⁵	69,095	10,490	15,058	133,019	36,076	48,669	58,759	471,014
Alabama.....	(d)	7,133	(d)	132,902	(d)	973	1,790	149,465
Mississippi.....		(d)	(d)	(d)	9,344	10,328	(d)	51,242
Tennessee.....	(d)	(d)	(d)	(d)	(d)	20,201	55,580	268,386
West South Central ⁶	89,410	296,844	125,695	132,631	175,872	363,926	77,516	1,211,776
Louisiana.....	782	55,704	(d)		124,646	210,759	29,853	392,510
Oklahoma.....		(d)	(d)	(d)	3,529	39,537	15,614	51,926
Texas.....	(d)	237,502	65,503	(d)	10,722	79,057	26,592	711,871
West ⁷	44,307	60,847	13,387	59,721	47,463	165,163	89,192	393,294
Colorado.....	(d)	(d)	(d)	(d)	(d)	2,885	3,518	(d)
Washington.....		(d)		(d)	37,090	10,023	23,615	(d)
Oregon.....	(d)	(d)			(d)	574	752	(d)
California.....	(d)	33,439	13,387	35,114	1,769	151,701	60,978	218,214

See footnotes at end of table.

TABLE 10.—CHEMICALS, CRUDE PETROLEUM, AND RUBBER CONSUMED BY SPECIFIED INDUSTRIES, FOR DIVISIONS AND STATES: 1947—Continued

DIVISION AND STATE	Organic chemicals						Crude petroleum		
	Aniline 100% (M pounds)	Acetic anhydride 100% (short tons)	Benzene 100% (M gals.)	Formal- dehyde 37% by wt. (M pounds)	Phenol 100% (M pounds)	Styrene 100% (short tons)	Total quantity, domestic and foreign (M barrels)	Domestic only	
								Quantity (M barrels)	Cost (delivered at refineries)
United States.....	68,324	352,788	108,533	480,413	220,692	232,197	1,887,890	1,789,920	\$3,841,040
New England ^a	4,267	297	686	54,488	36,546	87,951	430,855	421,715	452,428
Massachusetts.....	(d)	(d)	(d)	41,611	34,717	79,862			
Connecticut.....	(d)	(d)	(d)	12,817	1,829	(d)			
Middle Atlantic ^a	39,779	73,998	28,447	254,693	111,866	23,651			
New York.....	7,954	34,274	9,471	33,248	31,804	(d)			
New Jersey.....	31,368	17,892	9,450	164,920	61,816	20,558	110,325	76,109	195,387
Pennsylvania.....	457	21,832	9,526	56,525	18,546	(d)	148,740	111,299	286,962
North Central ^a	15,821	4,672	34,106	53,529	59,122	27,801	388,510	388,510	887,679
Ohio.....	(d)	(d)	61	26,144	518	(d)	71,890	71,890	176,379
Illinois.....	8,817	(d)	(d)	12,653	14,554	(d)	110,735	110,735	249,113
Indiana.....	(d)	(d)	(d)	(d)	(d)	(d)	96,095	96,095	219,320
Michigan.....	(d)	(d)	34,020	(d)	33,385	(d)			
Wisconsin.....				671	(d)		30,067	30,067	73,275
South ^a	8,457	273,821	34,935	107,071	6,323	92,794	818,398	809,108	1,724,700
Delaware.....	(d)		(d)	4,169	(d)		149,100	149,100	316,493
Louisiana.....			(d)	(d)	799	(d)	76,142	76,142	154,454
Oklahoma.....			(d)		445	(d)	524,822	524,291	1,118,191
Texas.....			(d)		1,056	(d)	16,231	16,231	29,414
Arkansas.....									
West ^a			10,159	10,632	7,835		375,127	375,127	666,233
Montana.....				(d)	(d)	(d)	11,298	11,298	21,397
Wyoming.....							25,221	25,221	46,148
California.....			8,525	(d)	(d)	(d)	317,080	317,080	554,746

DIVISION AND STATE	Rubber							
	Total		Natural rubber		Synthetic rubber		Reclaimed rubber	
	Quantity (long tons)	Cost ⁷	Quantity (long tons)	Cost	Quantity (long tons)	Cost	Quantity (long tons)	Cost ⁷
United States.....	1,298,854	\$520,638	533,512	\$258,438	511,275	\$228,648	254,067	\$33,552
New England, total ^a	146,827	61,026	60,964	30,760	57,570	26,744	28,293	3,522
New Hampshire.....	584	1,114	315	612	(d)	(d)	(d)	(d)
Massachusetts.....	101,767	40,938	38,701	19,647	41,217	19,023	21,840	2,268
Rhode Island.....	9,052	4,421	5,018	2,864	2,773	1,331	1,261	226
Connecticut.....	30,977	12,569	16,014	7,190	10,304	4,507	4,659	872
Middle Atlantic ^a	160,262	64,312	57,488	28,068	66,293	29,674	36,481	6,570
New York.....	33,216	13,642	11,574	6,006	12,863	6,149	8,779	1,487
New Jersey.....	32,536	13,692	9,835	5,284	10,830	5,774	11,871	2,634
Pennsylvania.....	94,510	36,978	36,079	16,778	42,600	17,751	15,831	2,449
East North Central ^a	617,967	246,381	268,080	127,944	227,224	101,702	122,603	16,735
Ohio.....	362,480	149,282	186,172	88,265	129,734	59,055	76,574	1,963
Indiana.....	44,331	23,217	9,766	5,419	20,709	9,457	13,800	8,341
Illinois.....	16,970	5,881	3,433	1,747	6,076	2,556	5,861	1,578
Michigan.....	117,863	48,581	52,229	24,704	40,308	20,349	19,028	3,528
Wisconsin.....	47,623	19,419	16,490	7,809	23,797	10,286	7,336	1,325
West North Central ^a	47,801	19,073	18,365	8,876	20,860	8,706	8,576	1,491
Iowa.....	21,342	8,742	8,224	4,085	9,197	3,963	3,921	694
Missouri.....	6,027	3,543	2,427	1,152	2,238	1,029	1,362	269
Nebraska.....	1,665	419	364	176	162	71	1,049	172
South Atlantic ^a	40,854	17,917	15,973	8,067	18,026	8,413	6,855	1,437
Maryland.....	32,968	15,062	14,988	7,627	14,103	6,462	3,877	973
East South Central ^a	120,855	48,345	48,017	23,814	54,203	23,813	18,635	718
Tennessee.....	65,272	21,826	25,390	13,182	19,449	8,434	10,433	210
Alabama.....	55,774	22,228	18,581	8,686	30,462	(d)	6,731	(d)
West South Central ^a	37,643	15,276	15,392	7,339	16,217	6,908	6,034	1,029
West ^a	126,645	48,308	49,233	23,570	50,882	22,688	26,530	2,050
California.....	107,745	41,906	42,764	20,379	45,084	19,843	19,897	1,684

^a Withheld to avoid disclosing figures for individual companies.¹ Includes 1,769 tons consumed by establishments classified in the flat glass and glass and glassware industries, for which State and division information is not shown.² Includes 40,489 tons consumed by establishments classified in the flat glass and glass and glassware industries, for which State and division information is not shown.³ In addition, quantities of the specified chemicals were consumed in the following States for which data could not be shown without disclosing figures for individual companies:

Ammonia: Delaware, Arkansas.

Chlorine: New Hampshire, Iowa, Delaware, Arkansas.

Hydrochloric acid: New Hampshire, Delaware, Kentucky, Arkansas, Montana, Nevada.

Nitric acid: Delaware, Arkansas, New Mexico, Arizona, Utah.

Salt cake: Delaware, Arkansas.

Soda ash: New Hampshire, Vermont, Iowa, Delaware, Kentucky, Arkansas.

Caustic soda: New Hampshire, Vermont, Iowa, Nebraska, Delaware, District of Columbia, Kentucky, Arkansas, Wyoming, New Mexico, Nevada.

Sulfuric acid: Vermont, Iowa, Nebraska, Delaware, Kentucky, Arkansas, Montana, Idaho, Wyoming, Arizona, Utah.

⁴ Combined total for New England and Middle Atlantic.⁵ In addition, quantities of the specified chemicals were consumed in the following States for which data could not be shown without disclosing figures for individual companies:

Aniline: Rhode Island, Missouri, Maryland, Virginia, North Carolina, Georgia, Tennessee.

Acetic anhydride: Missouri, Maryland, Virginia, West Virginia, South Carolina, Georgia, Tennessee.

Benzene: Maine, Kansas, Maryland, West Virginia, Tennessee, Alabama, Colorado, Utah, Nevada.

Formaldehyde: Maine, Rhode Island, Missouri, Kansas, Maryland, Virginia, West Virginia, North Carolina, Florida, Alabama, Washington, Oregon.

Phenol: Minnesota, Missouri, Maryland, Virginia, West Virginia, North Carolina, Georgia, Florida, Mississippi, Washington, Oregon.

Styrene: Connecticut, Missouri, West Virginia, Kentucky.

⁶ Combined total for South and West.⁷ Excludes any cost for reclaimed rubber made and consumed in the same plant.⁸ In addition, quantities of rubber were consumed by plants located in the following States for which data could not be shown without disclosing figures for individual companies: Maine, Vermont, Minnesota, Kansas, Delaware, Virginia, West Virginia, North Carolina, Kentucky, Mississippi, Oklahoma, Texas, Colorado, Washington, Oregon.

METALS

Mill Shapes and Castings

The materials used by the metal-fabricating industries in producing machinery, automobiles, and thousands of other products consist primarily of metal mill shapes and forms and castings. The tables which follow show the consumption, in terms of value and quantity, of the most important of these metals, namely—steel, aluminum, and copper and brass mill shapes and forms; and iron, steel, brass, and aluminum castings. Steel mill shapes are divided into carbon, alloy and stainless, with carbon steel subdivided into six shapes—bars, sheet and strip, structural shapes, plates, wire, and all other. Alloy steel (other than stainless) is split two ways—bars and all other, whereas for each of the other metals (stainless steel, aluminum, and copper and brass) the mill shapes are shown only in total as is each of the casting items.

The tables on consumption by industry include data for approximately 110 metal-fabricating industries, representing all significant users of metal in manufacturing. These industries fall within the broad groups of industries covered from "Fabricated metal products" through "Transportation equipment," with the addition of those industries producing metal furniture in the two-digit group "Furniture and fixtures" and a few miscellaneous industries.

Although there were certain industries consuming metal from which consumption data were not obtained—Metal Foil, Machine Shops, Fabricated Metal Products, N.E.C.—the effect of these industries on coverage is very small, with one exception. The lack of data on the consumption of aluminum foil stock in the Metal Foil Industry lowers the coverage of aluminum mill shapes to a level below that of the other metals, resulting in approximately 90 percent of total manufacturing consumption. For all other materials, the 1947 census coverage of total manufacturing consumption is substantially complete.

This is the case in spite of the use of minimum limits for the reporting of each metal shape by each establishment in order to relieve very small consumers of the necessity of reporting amounts that were negligible in terms of the total consumption. For each shape, manufacturing establishments were required to report consumption in quantity and cost,

provided that such usage during 1947 exceeded the following amounts; for iron castings, steel castings, and each of six carbon steel shapes—50 short tons; for alloy steel bars and all other alloy steel—25 short tons; for stainless steel, copper and brass wire mill shapes, copper and brass castings, aluminum mill shapes and aluminum castings—10 short tons. The tonnages missed as a result of this procedure do not, as a maximum, equal 2 percent of total manufacturing consumption.

However, in comparing the consumption data with production figures of mill shapes and castings, it should be noted that the consumption data cover manufacturing industries only. Consumption of these metal shapes in construction, mining, farm uses, construction and maintenance of power lines, and in other nonmanufacturing areas, such as export, is not covered.

The tables on consumption by geographic divisions and States include data on the total consumption of the 15 selected mill shapes and castings in those geographic areas. The data shown for each area represent the total consumption in that State or division by all of the industries listed in the table on consumption by industry. The minimum consumption limits specified for reporting tonnages and values, discussed in a preceding paragraph, together with the exclusion of certain industries from reporting consumption data, result in a slight variation of coverage from State to State. States containing a large proportion of small establishments or of establishments in industries for which metal consumed data were not obtained have a somewhat lower coverage than the country as a whole.

In order to arrive at a total consumption of mill shapes and forms and castings in the manufacture of fabricated products, it is necessary to add to consumption by establishments in the metal-fabricating industries, those tonnages used by the metal mills and foundries themselves in the manufacture of fabricated products within the same establishment. The data on mill shapes and castings produced and consumed within the same establishment were obtained in quantity terms only. In the table on consumption by States (table 12), the data on the use of mill shapes and castings by the producing establishments themselves are shown in quantity only, separately from the fabricating industries data. The total con-

sumption of mill shapes and castings in the manufacture of fabricated products in each geographic division and State is, of course, the total of the two.

The consumption data shown for each industry represent only the direct utilization of the specified mill shapes and castings by the reporting establishment and not the total metal content of the final product of the establishment. For example, the steel shown as consumed by the motor vehicle industry, represents only the steel consumed directly by establishments classified in the motor vehicle industry, in the forms of bars, sheets, etc. It does not include the weight of metal in subassemblies, steel stampings, forgings, wire products, etc., incorporated into the finished vehicles, but made by establishments classified in other industries.

Although the inquiry on metals consumed on the 1947 census schedules did not include a definition of the metal shapes specified, the metal fabricating companies' familiarity with the terms and their meaning provided a high degree of uniformity in reporting. For the user of the metals consumed data in the tables which follow, it may be noted that in the steel section, the term "bars and bar shapes" includes hot-rolled and cold-finished bars, concrete reinforcing bars, and tool-steel bars; sheet and strip includes hot and cold-rolled, galvanized, and long ternes, but excludes tin plate, terne plate, and black plate; wire includes plain, galvanized, and other coated wire, and does not include wire products such as nails, rope, fencing, etc.; all other carbon steel mill shapes and forms includes ingots, billets, wire rods, tin plate, terne plate, black plate, pipe, tubing, and rails, but not forgings or materials fabricated beyond the steel mill level.

The copper and copper-base alloy and aluminum rolled, drawn, and extruded shapes are similar to the steel mill products listed above, i.e., sheets, strip, bars, tubing, wire, etc. They do not include wire bars, ingots, or other unrolled forms of copper or

aluminum, nor do they include insulated wire and cable.

The castings (iron and steel, etc.) reported are only those in the rough and semifinished forms in which they are usually received from foundries. Castings, which had undergone extensive machining or other operations prior to their receipt at the consuming establishment, were considered as fabricated products rather than rough castings, and are not included in these data. However, such castings are reported as consumed by the establishments performing the machining operations.

Nonferrous Refinery Shapes and Scrap

Consumption of materials by the primary metal industries is represented in the tables in this section by four commodities: Aluminum and aluminum-base alloy refinery shapes and scrap (except home scrap); copper and copper-base alloy refinery shapes and scrap (except home scrap). For these four materials, the coverage obtained in the Census of Manufactures was substantially complete.

Information on a number of other materials consumed by some of the primary metal industries has been collected and published in individual reports for those industries, but the industries covered do not account for all of the consumption of the particular metal. For example, consumption data on slab zinc are omitted from this section because the consumption of slab zinc by galvanizers, producers of pigments, etc., was not collected, even though the consumption by brass mills and foundries is available.

There is a certain degree of duplication in the consumption of the refinery shapes, which stems from the fact that secondary smelters and refiners consume unalloyed metal refinery shapes in order to produce alloy ingots. The consumption of refinery shapes by secondary smelters and refiners is shown separately in the distribution by industry.

TABLE 11.—CONSUMPTION OF SELECTED METAL
[Money figures in

No.	CONSUMING INDUSTRY	Total steel		Steel mill shapes and forms					
				Carbon steel					
				Bars and bar shapes		Sheet and strip		Structural shapes	
	Title	Tons	Value	Tons	Value	Tons	Value	Tons	Value
	Metal producing and fabricating industries, total..	43, 146, 846	n.a.	6, 386, 926	n.a.	15, 911, 270	n.a.	3, 481, 236	n.a.
	Primary metal industries, total ¹	3, 763, 777	n.a.	658, 318	n.a.	223, 355	n.a.	52, 229	n.a.
	Metal fabricating industries, total ¹	39, 383, 069	\$3, 799, 438	5, 728, 608	\$482, 990	15, 687, 915	\$1, 442, 573	3, 429, 007	\$244, 564
34	Fabricated metal products.....	18, 834, 946	1, 799, 631	2, 020, 682	163, 076	6, 393, 197	580, 635	2, 311, 687	161, 899
3411	Tin cans and other tinware.....	3, 105, 461	354, 904	2, 259	191	35, 207	2, 911	—	—
3421	Outlery.....	23, 773	8, 708	3, 555	520	14, 257	5, 515	—	—
3422	Edge tools.....	41, 775	5, 016	24, 404	2, 370	14, 655	1, 825	—	—
3423	Hand tools, n.e.c.....	244, 840	23, 854	108, 397	8, 334	60, 347	6, 234	(²)	(²)
3424	Files.....	22, 488	2, 471	*22, 488	*2, 471	—	—	—	—
3425	Hand saws and saw blades.....	28, 113	10, 265	1, 554	491	12, 750	4, 311	—	—
3429	Hardware, n.e.c.....	490, 074	62, 367	51, 163	5, 019	376, 741	37, 370	5, 996	419
3431	Metal plumbing fixtures.....	23, 878	3, 281	640	62	20, 127	2, 153	—	—
3432	Oil burners.....	8, 752	1, 523	2, 741	279	4, 074	545	—	—
3439	Heating and cooking apparatus, n.e.c.....	1, 118, 650	112, 913	42, 889	4, 065	967, 109	93, 768	3, 143	245
3441	Structural and ornamental products.....	3, 874, 821	284, 341	633, 376	46, 126	472, 526	40, 201	2, 087, 515	145, 635
3442	Metal doors, sash, and trim.....	355, 893	36, 834	151, 539	12, 034	137, 970	13, 347	24, 515	1, 748
3443	Boiler shop products.....	2, 289, 266	196, 035	66, 220	5, 776	416, 687	34, 812	181, 933	13, 052
3444	Sheet-metal work.....	862, 881	80, 630	74, 509	6, 789	705, 777	63, 181	5, 151	501
3461	Vitreous-enamelled products.....	91, 684	8, 419	—	—	91, 239	8, 068	—	—
3463	Metal stampings.....	2, 412, 785	239, 346	25, 340	2, 564	1, 906, 426	166, 421	1, 099	159
3471	Lighting fixtures.....	127, 009	15, 905	2, 709	270	116, 176	13, 770	—	—
3481	Nails and spikes.....	68, 329	7, 119	(³)	(³)	40, 433	4, 065	—	—
3489	Wirework, n.e.c.....	912, 384	117, 440	31, 964	3, 406	66, 987	9, 541	1, 214	100
3491	Metal barrels, drums, and pails.....	873, 408	74, 570	1, 956	162	818, 823	63, 158	—	—
3493	Steel springs.....	418, 663	36, 223	137, 190	10, 477	8, 912	610	—	—
3494	Bolts, nuts, washers, and rivets.....	1, 243, 783	104, 101	478, 741	34, 369	102, 588	8, 480	521	40
3496	Screw-machine products.....	197, 236	23, 376	157, 239	17, 321	3, 380	349	—	—
35	Machinery (except electrical).....	6, 420, 110	706, 241	1, 716, 765	180, 080	2, 130, 604	219, 166	493, 431	40, 505
3511	Steam engines and turbines.....	46, 846	0, 882	6, 111	661	4, 374	708	1, 029	89
3519	Internal-combustion engines.....	80, 384	11, 224	24, 548	2, 971	26, 426	3, 038	1, 228	107
3521	Tractors.....	576, 562	47, 514	252, 646	20, 319	68, 983	5, 556	28, 662	1, 961
3522	Farm machinery (except tractors).....	1, 278, 347	112, 410	630, 852	48, 658	391, 912	36, 709	64, 409	5, 767
3531	Construction and mining machinery.....	779, 391	67, 009	161, 019	14, 215	34, 413	7, 198	155, 291	12, 044
3532	Oil-field machinery and tools.....	255, 080	27, 626	44, 003	3, 965	20, 659	2, 028	46, 349	3, 433
3541	Machine tools.....	59, 629	9, 848	30, 528	4, 273	4, 291	470	3, 464	302
3542	Metalworking machinery, n.e.c.....	140, 831	16, 571	28, 388	3, 240	6, 203	721	5, 502	552
3543	Cutting tools, jigs, fixtures, etc.....	96, 217	22, 521	21, 435	2, 841	26, 007	2, 627	789	72
3551	Food-products machinery.....	90, 845	15, 068	22, 300	2, 502	28, 814	3, 492	8, 012	714
3552	Textile machinery.....	105, 893	16, 914	54, 893	5, 906	17, 274	2, 391	5, 524	609
3553	Woodworking machinery.....	26, 502	3, 686	9, 688	1, 235	3, 694	457	4, 317	552
3554	Paper-industries machinery.....	23, 298	4, 262	7, 585	1, 005	811	145	3, 152	337
3555	Printing-trades machinery.....	12, 676	1, 941	9, 068	1, 384	885	122	—	—
3559	Special-industry machinery, n.e.c.....	199, 033	21, 723	36, 771	3, 831	30, 043	3, 410	21, 303	1, 753
3561	Pumps and compressors.....	125, 305	16, 237	27, 237	3, 299	30, 440	3, 125	14, 285	1, 351
3562	Elevators and escalators.....	54, 804	5, 005	11, 756	1, 132	7, 234	945	24, 443	1, 835
3563	Conveyors.....	238, 959	21, 329	56, 224	4, 868	55, 184	5, 329	56, 080	4, 452
3564	Blowers and fans.....	87, 068	9, 648	8, 921	986	54, 612	5, 656	4, 954	424
3565	Industrial trucks and tractors.....	84, 318	7, 339	25, 316	2, 452	23, 231	1, 707	10, 857	921
3566	Power-transmission equipment.....	106, 591	14, 192	29, 922	3, 660	42, 717	5, 160	1, 207	96
3567	Industrial furnaces and ovens.....	41, 208	4, 826	3, 972	361	10, 072	1, 121	8, 198	760
3568	Mechanical stokers.....	26, 332	2, 558	4, 083	286	8, 953	762	1, 855	148
3569	General industrial machinery, n.e.c.....	115, 548	16, 072	13, 448	1, 739	15, 473	1, 843	7, 376	800
3571	Computing and related machines.....	48, 998	7, 213	13, 100	1, 820	32, 068	4, 480	—	—
3572	Typewriters.....	31, 335	4, 697	5, 952	902	19, 223	2, 731	(²)	(²)
3576	Scales and balances.....	15, 247	2, 789	2, 361	308	10, 788	2, 123	1, 594	147
3579	Office and store machines, n.e.c.....	23, 246	4, 289	2, 448	415	18, 418	3, 048	(²)	(²)
3581	Domestic laundry equipment.....	289, 361	30, 540	25, 153	3, 073	220, 985	24, 023	(²)	(²)
3582	Laundry and dry-cleaning machinery.....	22, 064	3, 304	3, 267	402	10, 390	1, 178	1, 253	142
3583	Sewing machines.....	11, 705	1, 429	6, 174	655	4, 748	559	—	—
3584	Vacuum cleaners.....	32, 436	5, 761	3, 171	451	25, 114	4, 258	(²)	(²)
3585	Refrigeration machinery.....	822, 462	92, 878	29, 788	3, 538	725, 182	70, 874	3, 644	443
3586	Measuring and dispensing pumps.....	43, 949	4, 706	9, 003	1, 086	27, 378	2, 846	4, 228	350
3589	Service and household machines, n.e.c.....	20, 416	3, 788	1, 848	206	20, 831	2, 358	2, 727	239
3591	Valves and fittings, except plumbers'.....	88, 615	12, 489	45, 195	4, 172	5, 078	515	1, 099	105
3593	Ball and roller bearings.....	309, 549	49, 663	47, 691	7, 193	48, 187	5, 393	—	—
36	Electrical machinery.....	2, 149, 150	244, 088	287, 011	26, 359	1, 078, 412	119, 849	45, 535	4, 267
3611	Wiring devices and supplies.....	350, 553	29, 279	82, 511	6, 084	134, 978	12, 504	1, 763	150
3613	Electrical measuring instruments.....	12, 927	2, 257	277	50	*8, 822	*1, 245	—	—
3614	Motors and generators.....	668, 624	66, 068	66, 154	6, 514	287, 570	35, 227	11, 467	1, 063
3615	Transformers.....	222, 233	34, 736	8, 464	900	82, 237	10, 092	7, 659	630
3616	Electrical control apparatus.....	154, 316	16, 794	9, 714	1, 014	116, 837	11, 568	14, 619	1, 477
3617	Electrical welding apparatus.....	170, 670	16, 428	5, 617	503	13, 077	1, 180	1, 469	175
3619	Electrical industrial apparatus, n.e.c.....	3, 659	521	190	16	1, 928	233	388	31
3621	Electrical appliances.....	218, 162	24, 916	3, 170	420	204, 878	21, 426	1, 472	191
3631	Insulated wire and cable.....	40, 416	6, 526	—	—	15, 039	1, 952	—	—
3641	Engine electrical equipment.....	237, 694	23, 738	89, 993	8, 680	94, 918	9, 705	—	—
3661	Radios and related products.....	97, 382	13, 464	4, 738	582	79, 784	9, 680	—	—
3664	Telephone and telegraph equipment.....	59, 957	7, 903	11, 071	1, 099	33, 891	4, 641	6, 698	550
3669	Communication equipment, n.e.c.....	12, 557	1, 466	5, 812	547	4, 463	496	(²)	(²)

See footnotes at end of table.

SHAPES AND FORMS, BY INDUSTRY: 1947
 (thousands of dollars)

Steel mill shapes and forms—Continued												No.
Carbon steel—Continued						Alloy steel (except stainless)				Stainless steel		
Plates		Wire		All other mill shapes and forms		Bars and bar shapes		All other mill shapes and forms		All shapes and forms		
Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	
4,766,819	n.a.	3,841,691	n.a.	5,871,514	n.a.	1,700,395	n.a.	982,736	n.a.	204,259	n.a.	
170,483 4,596,336	n.a. \$351,914	2,084,987 1,756,704	n.a. \$195,510	360,811 5,510,703	n.a. \$600,923	27,241 1,673,154	n.a. \$202,634	179,945 802,791	n.a. \$120,884	6,408 197,851	n.a. \$157,446	
2,241,626 (3)	172,456 (3)	1,457,791 5,812 400 354	160,650 580 134 36	3,826,232 *3,062,671	431,035 *351,061	377,916 1,078 1,815 50,694 (5)	39,644 127 650 5,600 (5)	107,758 512 1,118 650 1,707	17,323 251 400 87 248	97,857 72,913	34 3411 3421 3422 3423 3424	
749	71	9,194	1,846	*13,220	*1,458	1,319 2,697	997 452	*9,785 1,159 (7)	*4,405 185 (7)	(5) 6,419 *662	(5) 4,039 *601	3425 3429 3431
4,290	310	37,524 2,136	3,950 253	4,085 313	623 212	(5) (5)	(5) (5)	314 54	54	6,048	4,863	3432 3433 3439
560,197 15,140 1,491,627 28,795	40,259 1,175 116,899 2,309	21,760 6,020 6,181 3,810	2,090 621 777 374	65,808 6,882 95,399 40,117	5,958 603 12,666 3,997	3,309 1,595 1,084 104	334 238 247 35	20,467 1,084 20,869 898	2,856 186 3,060 103	863 11,148 9,257 3,720 445	882 7,002 8,746 3,261 351	3441 3442 3443 3444 3461
53,135 343 (3) 427 9,680	4,287 31 (3) 69 646	20,071 1,480 19,872 787,692 2,679	1,851 171 2,447 98,060 243	*360,344 4,235 *7,709 13,440 28,989	*38,726 505 *542 1,731 1,968	6,827 168 2,657	856 29 531	5,912 165 315 4,303	946 30 65 596	33,031 1,733	23,536 1,099	3463 3471 3481 3489 3491
5,116	315	6,325 510,340 12,070	1,422 44,845 1,074	98,097 998	7,332 151	265,797 20,250 17,308	23,643 2,873 2,831	439 3,137 4,900	71 3,137 603	3,497 1,281	2,710 1,047	3493 3494 3495
976,554 23,445 11,068 47,316 70,545 291,428	80,233 1,966 1,955 3,584 5,770 22,992	67,256 (3) 120 3,584 15,744 4,713	11,192 (3) 13 113 1,512 684	396,999 *6,689 9,612 113,422 51,175 29,912	47,494 *941 2,149 9,041 7,020 3,118	361,816 1,458 5,600 53,610 17,085 27,015	64,070 450 989 4,937 2,222 3,603	226,133 38,773 98 478 80 1,406 3,221 2,338	50,552 1,963 922 597 1,839 817 3531	44,728 1,963 922 597 1,531 817 3531	35 3511 3519 3521 3522 3531	
32,413 3,159 77,500 27,501 28,735	2,935 310 6,776 2,478 2,293	514 110 416 481 214	110 230 124 27	13,671 1,314 9,072 2,232 1,105	1,716 108 1,099 324 163	88,839 15,787 8,994 16,734 721	11,600 3,707 2,032 13,456 116	8,546 1,005 4,381 778 714	1,741 501 1,538 346 190	86 81 375 260 5,730	98 78 383 253 5,571	3532 3541 3542 3543 3551
8,084 1,874 6,562 1,091 82,154	775 177 673 75 6,883	5,503 (3) 1,020 2,666	2,437 (3) 138 380	7,023 *5,296 383 1,435 15,435	1,097 *630 94 319 1,544	3,984 1,157 2,216 *158 3,261	527 801 451 *30 664	524 451 140 (5) (5)	59 66 33 39 672	3,084 85 1,429 39 2,759	3,113 68 1,376 31 2,686	3552 3553 3554 3555
17,898 5,985 50,755 16,605 18,831	1,652 403 4,006 1,409 1,360	753 225 1,272 239 3,324	101 69 215 57 435	22,437 5,090 8,563 417 969	2,705 610 1,005 161 181	6,245 610 5,663 161 181	891 71 751 291 1,580	3,186 11 4,131 720 210	845 567 438 24	2,815 136 309	2,268 136 305	3561 3562 3563 3564 3565
10,987 17,288 2,841 60,093 (3)	804 1,242 223 5,740 (3)	554 (3) 2,542 111	114 (3) 401 53	119 *520 8,447 12,956 *1,948	33 *129 1,070 2,500 *315	14,470 (3)	2,520 (3)	6,343 153 298 303	1,573 69 56 303	272 1,158	232 1,213	3566 3567 3568 3569 3571
40,000 4,710	2,342 472	787 305	65 16	*1,127 *783 *2,054 29,706 *1,572 244	*54 *215 *368 4,133 *243 63							
13,355 521 1,556	1,101 36 139	5,230 (3) 1,445	554 (3) 176	*21,607 5,189	*2,954 676	2,335 81,767	312 13,045	2,532 111,166	338 20,953	3,515 334	3,440 259	3591 3593
160,504 2,231	13,213 168	169,617 7,455	14,200 632	213,252 120,924	23,010 9,566	23,623 *218 836	3,996 *35 352	162,880 (5) 2,749	31,629 (3) 427	8,916 173 243	7,565 140 183	36 3611 3613
77,176 26,530 7,561	6,356 2,287 631	10,529 335 1,189	1,084 46 199	54,878 4,131 260	6,690 513 65	7,254 4,800 1,201	1,076 725 350	82,882 87,888 1,631	7,426 19,412 371	714 189 1,304	632 131 1,119	3614 3615 3616
2,148 912 2,726	179 68 252	144,109 2,259	11,567 205	(3) (3)	(3) (3)	1,136 *740	155 *260	*642 (7)	*292 (7)	2,472 *241	2,377 *173	3617 3619 3621
40,639	3,219	2,507	277	*25,377 1,719	*4,576 466	6,017	752	2,539	387	362	302	3631 3641
(3) 581	(3) 53	(3) 956	(3) 124	1,140 3,195 *1,628	383 601 *160	(3) 821	(3) 291	11,268 2,617 *664	2,552 499 *263	174 127	201 145	3661 3664 3669

TABLE 11.—CONSUMPTION OF SELECTED METAL

CONSUMING INDUSTRY		Total steel		Steel mill shapes and forms					
				Carbon steel					
				Bars and bar shapes		Sheet and strip		Structural shapes	
No.	Title	Tons	Value	Tons	Value	Tons	Value	Tons	Value
37	Transportation equipment.....	9,264,046	\$825,547	1,085,083	\$89,944	5,238,131	\$449,403	577,350	\$37,815
3717	Motor vehicles and parts.....	6,344,400	568,222	769,913	63,360	4,625,891	399,166	9,422	877
3713	Truck and bus bodies.....	210,604	18,775	33,434	2,715	124,083	11,106	21,376	1,765
3715	Truck trailers.....	91,479	9,288	10,060	921	27,864	3,237	29,556	2,495
3716	Automobile trailers.....	6,802	919	617	69	1,302	181	3,408	438
3721	Aircraft.....	17,950	6,264	2,034	310	3,888	336	1,413	146
3722	Aircraft engines.....	22,992	11,320	3,449	380	2,468	302	(²)	(²)
3729	Aircraft equipment, n.e.c.....	5,581	1,579	1,421	225	515	78	600	112
3731	Ship building and repairing.....	646,106	47,008	34,532	3,019	68,068	4,991	100,169	6,884
3732	Boat building and repairing.....	18,495	2,105	1,861	201	3,371	376	2,422	206
3741	Locomotives and parts.....	192,653	21,189	23,659	1,963	22,417	1,886	15,149	1,210
3742	Railroad and street cars.....	1,592,878	126,352	181,756	14,709	280,988	20,274	393,335	23,682
3751	Motorcycles and bicycles.....	114,266	12,525	22,347	2,069	77,088	7,470		
	Miscellaneous manufactures.....	1,708,402	133,206	618,867	43,531	48,010	6,567	1,004	78
3821	Mechanical measuring instruments.....	41,204	5,912	6,163	744	22,982	2,961	1,004	78
3861	Photographic equipment.....	13,785	2,222	1,403	252	12,001	1,631		
3904	Needles, pins, and fasteners.....	23,205	4,136			13,027	1,975		
3391	Iron and steel forgings.....	1,630,208	120,936	611,301	42,535	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
25	Furniture and fixtures.....	1,006,415	90,725	(¹¹)	(¹¹)	799,561	66,953	(¹¹)	(¹¹)
2511	Wood house furniture, except upholstered.....	33,278	3,769	(¹¹)	(¹¹)	21,636	2,543	(¹¹)	(¹¹)
2512	Household furniture, upholstered.....	8,053	1,266	(¹¹)	(¹¹)	(³)	(³)	(¹¹)	(¹¹)
2514	Metal house furniture, except upholstered.....	249,417	25,668	(¹¹)	(¹¹)	198,039	18,353	(¹¹)	(¹¹)
2515	Mattresses and bedsprings.....	136,726	13,253	(¹¹)	(¹¹)	44,623	4,569	(¹¹)	(¹¹)
2521	Wood office furniture.....	1,003	197	(¹¹)	(¹¹)	(³)	(³)	(¹¹)	(¹¹)
2522	Metal office furniture.....	261,774	19,257	(¹¹)	(¹¹)	257,612	18,643	(¹¹)	(¹¹)
2531	Public building furniture.....	29,861	3,711	(¹¹)	(¹¹)	20,153	2,384	(¹¹)	(¹¹)
2532	Professional furniture.....	25,509	3,213	(¹¹)	(¹¹)	14,317	1,842	(¹¹)	(¹¹)
2541	Partitions and fixtures.....	255,648	19,732	(¹¹)	(¹¹)	241,514	18,398	(¹¹)	(¹¹)
2591	Restaurant furniture.....	3,817	537	(¹¹)	(¹¹)	1,667	221	(¹¹)	(¹¹)
2599	Furniture and fixtures, n.e.c.....	1,339	122	(¹¹)	(¹¹)	(³)	(³)	(¹¹)	(¹¹)
	Primary metal industries ¹	3,763,777		658,318		223,355		52,229	
	Steel works and rolling mills, independent pipe mills, wire drawing establishments, and cold rolling, draw- ing, and finishing establishments.....	3,763,777		658,318		223,355		52,229	

See footnotes at end of table.

SHAPES AND FORMS, BY INDUSTRY: 1947—Continued

Steel mill shapes and forms—Continued													No.
Carbon steel—Continued						Alloy steel (except stainless)				Stainless steel			
Plates		Wire		All other mill shapes and forms		Bars and bar shapes		All other mill shapes and forms		All shapes and forms			
Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value		
1,211,936	\$85,464	50,520	\$7,088	354,765	\$47,392	580,424	\$62,781	131,574	\$17,254	34,263	\$28,406	37	
144,999	10,929	47,823	6,789	131,942	14,545	542,069	56,148	59,982	7,030	12,359	9,378	3717	
26,691	2,035			2,111	343		506	1,183	137	620	616	3713	
17,442	1,663			1,041	231	962	174	4,554	567			3715	
				836	123			639	108			3716	
1,126	113			3,558	657	1,693	570	1,143	971	3,095	3,161	3721	
433	63			*1,201	*217	6,566	2,746	591	369	8,284	7,243	3722	
(1) 436,612	(1) 30,799	425	69	*400	*106	1,701	415	455	170	489	473	3729	
8,559	765			5,142	591	468	70	133	24	579	561	3731	
63,003	4,922			1,844	295					238	263	3732	
				42,103	6,974	2,399	273	23,661	3,759	262	202	3741	
511,852	34,086	1,161	125	166,680	21,220	22,767	2,160	36,002	3,587	8,337	6,509	3742	
1,219	89	1,111	105	7,907	2,090	1,303	170	3,231	532			3751	
5,716	548	11,520	2,380	513,643	28,347	329,975	32,143	173,404	15,778	6,263	3,834	3821	
5,716	548	1,812	311	1,881	269	854	194			792	807	3861	
		9,708	2,069	(8) 511,762	(8) 28,078	(1) *470	(1) *92	(1) 173,404	(1) 15,778	(1) *381	(1) *339	3964	
(10)	(10)	(10)	(10)			328,651	31,857			(1) 5,090	(1) 2,688	3991	
(11)	(11)	(11)	(11)	205,812	23,645			1,042	127	(10)	(10)	25	
(11)	(11)	(11)	(11)	12 11,642	12 1,226					(10)	(10)	2511	
(11)	(11)	(11)	(11)	13 8,053	13 1,266					(10)	(10)	2512	
(11)	(11)	(11)	(11)	12 51,266	12 7,302	(14)	(14)	15 112	15 13	(10)	(10)	2514	
(11)	(11)	(11)	(11)	13 92,103	13 8,684					(10)	(10)	2515	
(11)	(11)	(11)	(11)	13 1,003	13 197					(10)	(10)	2521	
(11)	(11)	(11)	(11)	12 4,162	12 614					(10)	(10)	2522	
(11)	(11)	(11)	(11)	12 9,698	12 1,327					(10)	(10)	2531	
(11)	(11)	(11)	(11)	12 11,192	12 1,371					(10)	(10)	2532	
(11)	(11)	(11)	(11)	13 13,632	13 1,273	(14)	(14)	15 502	15 61	(10)	(10)	2541	
(11)	(11)	(11)	(11)	13 1,722	13 263	(14)	(14)	15 428	15 53	(10)	(10)	2591	
(11)	(11)	(11)	(11)	13 1,339	13 122					(10)	(10)	2599	
170,483		2,084,987		360,811		27,241		179,945		6,408			
170,483		2,084,987		360,811		27,241		179,945		6,408			

TABLE 11.—CONSUMPTION OF SELECTED METAL SHAPES AND FORMS, BY INDUSTRY: 1947—Continued

[Money figures in thousands of dollars. The data below for castings include only purchases by metal-fabricating plants; they exclude castings produced and consumed in the same establishment]

No.	CONSUMING INDUSTRY	Iron castings		Steel castings		Copper and copper-base alloys				Aluminum and aluminum-base alloys			
		Rough and semifinished (received from foundry)		Rough and semifinished (received from foundry)		Brass and wire mill shapes and forms (rolled, drawn, and extruded) ¹⁶		Castings, rough and semifinished (received from foundry)		Mill shapes (rolled, drawn, and extruded) ¹⁷		Castings, rough and semifinished (received from foundry)	
	Title	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value
34	Fabricated metal products.....	232,566	\$56,069	20,543	\$6,270	215,221	\$132,595	15,299	\$12,033	228,974	\$115,061	8,941	\$8,316
3411	Tin cans and other tinware.....					593	389	(d)	(d)	57	49		
3421	Cutlery.....	268	93			3,541	2,018			315	178	(d)	(d)
3422	Edge tools.....	3,627	1,137	439	182	125	117					(d)	(d)
3423	Hand tools, n.e.c.....	20,328	6,077	1,663	478	1,330	928	73	56	1,030	758	1,703	1,285
3424	Files.....												
3425	Hand saws and saw blades.....	(d)	(d)			152	157					(d)	(d)
3429	Hardware, n.e.c.....	28,161	6,888	1,531	552	21,517	13,798	3,007	2,198	1,627	1,023	733	592
3431	Metal plumbing fixtures and fittings.....	4,151	773	(d)	(d)	33,810	20,511	7,884	6,142	906	479	37	47
3432	Oil burners.....	6,830	1,890	(d)	(d)	362	287	222	176	(d)	(d)	1,439	1,764
3439	Heating and cooking apparatus, n.e.c.....	122,337	28,074	3,645	1,150	11,636	8,815	2,221	1,856	16,627	9,377	1,744	1,645
3441	Structural and ornamental products.....	10,196	1,691	3,041	863	843	728	416	366	7,011	3,991	198	163
3442	Metal doors, sash, and trim.....	2,142	710			504	304	32	22	15,643	10,695	(d)	(d)
3443	Boiler shop products.....	12,779	2,809	7,827	2,451	1,678	1,005	192	164	1,025	607	82	33
3444	Sheet-metal work.....	2,614	582	(d)	(d)	2,946	2,137	189	151	105,253	42,194	148	138
3461	Vitreous-enameled products.....					188	102			391	213		
3463	Metal stampings.....	7,710	1,849	905	200	43,520	26,906	298	275	63,613	34,558	951	801
3471	Lighting fixtures.....	3,668	1,074	1,179	296	10,787	7,321	461	387	3,564	2,269	1,395	1,428
3481	Nails and spikes.....	187	55			1,928	1,250			(d)	(d)		
3489	Wirework, n.e.c.....	3,407	1,006	313	89	15,627	11,604	110	101	1,018	1,185	511	420
3491	Metal barrels, drums, and pails.....									7,290	6,087	(d)	(d)
3493	Steel springs.....	547	204	(d)	(d)	(d)	(d)						
3494	Bolts, nuts, washers, and rivets.....	2,565	813	(d)	(d)	30,204	17,568	(d)	(d)	1,829	1,089	(d)	(d)
3495	Screw-machine products.....	1,091	344			33,950	16,650	194	139	1,775	1,339	(d)	(d)
35	Machinery (except electrical).....	2,128,615	467,327	470,506	150,836	155,036	101,363	66,600	51,154	36,451	23,064	44,980	43,813
3511	Steam engines and turbines.....	18,528	5,382	11,763	5,835	1,937	1,396	800	793	(d)	(d)	25	34
3519	Internal-combustion engines.....	221,898	60,220	7,978	2,778	13,019	7,502	1,281	1,172	1,374	908	5,383	6,291
3521	Tractors.....	355,494	66,097	40,238	13,781	2,997	1,910	682	548			2,150	1,764
3532	Farm machinery (except tractors).....	203,175	42,836	9,086	3,474	1,829	1,426	1,138	867	3,428	1,907	2,592	2,026
3531	Construction and mining machinery.....	89,439	17,596	178,029	53,585	1,491	1,391	2,473	1,863			321	236
3532	Oil-field machinery and tools.....	14,674	2,431	23,566	9,275	179	128	774	621			35	69
3541	Machine tools.....	130,964	30,474	2,326	997	145	104	776	778	(d)	(d)	609	549
3542	Metalworking machinery, n.e.c.....	89,407	18,020	46,221	12,048	2,634	1,826	3,029	2,392	356	283	2,304	3,085
3543	Cutting tools, jigs, fixtures, etc.....	39,419	8,284	4,560	1,310	699	482	380	274	883	594	99	113
3551	Food-products machinery.....	38,561	10,198	5,027	1,610	2,660	2,076	2,917	2,771	892	499	1,256	1,307
3552	Textile machinery.....	69,594	17,782	1,135	470	1,437	965	283	217	1,544	1,103	234	267
3553	Woodworking machinery.....	34,917	5,597	1,759	398	260	228	93	77	31	28	1,018	840
3554	Paper-industries machinery.....	49,375	10,836	3,492	1,218	1,105	872	1,605	1,305	25	26	15	23
3555	Printing-trades machinery.....	40,438	11,083	510	181	3,229	2,239	448	426	85	62	384	564
3559	Special-industry machinery, n.e.c.....	72,004	16,159	22,303	7,277	4,646	3,673	1,910	1,539	795	460	1,183	1,322
3561	Pumps and compressors.....	132,460	33,001	12,018	5,656	5,726	4,344	10,571	8,303	56	42	1,016	1,419
3562	Elevators and escalators.....	9,254	1,999	1,882	785	921	784	113	96	68	43	161	165
3563	Conveyors.....	33,902	7,054	14,838	4,556	151	125	775	569	79	76	126	147
3564	Blowers and fans.....	11,546	2,687	1,123	511	1,114	842	75	79	1,085	662	631	701
3565	Industrial trucks and tractors.....	20,448	3,928	13,944	3,557	184	192	86	80			19	22
3566	Power-transmission equipment.....	65,802	12,636	7,918	2,338	2,209	1,452	7,998	4,450	50	36	867	797
3567	Industrial furnaces and ovens.....	3,339	734	2,221	665	737	537	75	08	(d)	(d)	6	6
3568	Mechanical stokers.....	18,356	3,568	1,558	128	28	24	132	111			(d)	(d)
3569	General industrial machinery, n.e.c.....	40,170	10,788	6,724	2,405	14,148	11,251	1,662	1,531	228	138	398	577
3571	Computing and related machines.....	2,302	777			1,650	1,487	46	38	363	233	527	884
3572	Typewriters.....	4,672	1,519			381	199			52	49	2,427	2,190
3576	Scales and balances.....	6,633	2,112	250	98	209	135	78	52	196	118	373	381
3579	Office and store machines, n.e.c.....	3,002	1,266	(d)	(d)	764	793	(d)	(d)	432	271	293	527
3581	Domestic laundry equipment.....	31,151	6,488			787	549	288	270	4,019	3,167	9,018	7,016
3582	Laundry and dry-cleaning machinery.....	31,269	6,616	784	351	559	272	862	702	305	297	810	778
3583	Sewing machines.....	17,542	4,720			90	38					308	167
3584	Vacuum cleaners.....	2,383	942			1,076	941			920	604	5,724	5,492
3585	Refrigeration machinery.....	64,035	13,675	7,442	1,912	25,232	21,310	608	507	16,845	10,066	1,974	1,166
3586	Measuring and dispensing pumps.....	15,792	4,263	(d)	(d)	1,907	1,027	898	711	137	100	510	478
3589	Service and household machines, n.e.c.....	4,851	1,637	786	461	1,975	963	769	622	90	51	712	889
3591	Valves and fittings, except plumbers'.....	123,677	19,286	26,731	10,043	56,814	27,396	21,245	15,460	1,213	941	1,572	1,472
3593	Ball and roller bearings.....	8,142	1,666	6,714	2,843	817	484	1,642	1,664			(d)	(d)
36	Electrical machinery.....	240,305	55,743	21,023	7,889	342,834	227,383	10,180	9,833	23,568	14,385	22,301	20,810
3611	Wiring devices and supplies.....	18,108	4,550	(d)	(d)	17,935	11,556	1,803	1,650	2,446	1,372	2,277	2,308
3613	Electrical measuring instruments.....	566	187			7,244	4,678	49	45	1,067	829	2,589	2,298
3614	Motors and generators.....	175,640	39,306	16,178	6,217	38,940	26,624	1,632	1,507	3,381	1,251	6,296	5,314
3615	Transformers.....	3,845	784	(d)	(d)	34,849	26,216	286	263	616	736	82	69
3616	Electrical control apparatus.....	7,119	2,561	4,024	1,372	26,712	17,836	4,190	3,955	3,105	1,979	267	351
3617	Electrical welding apparatus.....	911	295	(d)	(d)	3,512	2,885	993	1,122	244	151	81	132
3619	Electrical industrial apparatus, n.e.c.....	144	41			1,879	1,413	(d)	(d)	384	482	(d)	(d)
3621	Electrical appliances.....	10,297	2,684	159	36	3,934	3,030	282	193	5,426	3,061	6,979	6,360
3631	Insulated wire and cable.....	(d)	(d)			143,400	88,081	(d)	(d)	1,570	698		
3641	Engine electrical equipment.....	18,718	3,972	662	264	37,783	25,378			178	126	2,130	1,994
3661	Radio and related products.....	1,030	372			12,875	10,787	846	1,004	4,005	2,828	956	1,269
3664	Telephone and telegraph equipment.....	2,687	496			12,552	7,895	38	53	1,246	1,072	295	458
3669	Communication equipment, n.e.c.....	1,262	495	(d)	(d)	1,219	1,004	61	41			349	269

See footnotes at end of table.

TABLE 11.—CONSUMPTION OF SELECTED METAL SHAPES AND FORMS, BY INDUSTRY: 1947—Continued

No.	CONSUMING INDUSTRY	Iron castings		Steel castings		Copper and copper-base alloys				Aluminum and aluminum-base alloys			
		Rough and semifinished (received from foundry)		Rough and semifinished (received from foundry)		Brass and wire mill shapes and forms (rolled, drawn, and extruded) ¹⁶		Castings, rough and semifinished (received from foundry)		Mill shapes (rolled, drawn, and extruded) ¹⁷		Castings, rough and semifinished (received from foundry)	
	Title	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value
37	Transportation equipment.....	1,621,591	\$315,264	271,105	\$76,471	129,242	\$78,672	8,490	\$7,557	67,441	\$48,789	28,245	\$23,826
3717	Motor vehicles and parts.....	1,459,485	291,185	83,823	18,676	118,747	71,196	3,159	3,241	21,487	13,969	20,844	17,290
3713	Truck and bus bodies.....	8,161	2,138	2,549	854	15	4	103	71	3,099	1,894	(d)	(d)
3715	Truck trailers.....	1,523	371	4,465	1,655					4,544	2,705	(d)	(d)
3716	Automobile trailers.....	(d)	(d)	(d)	(d)					4,128	2,446	(d)	(d)
3721	Aircraft.....			170	82	195	172	65	129	26,230	20,944	1,211	2,491
3722	Aircraft engines.....	14,614	2,700	257	350	168	155	76	77	2,359	2,934	3,019	4,568
3729	Aircraft equipment, n.e.c.....					128	121			1,012	841	105	331
3731	Ship building and repairing.....	2,564	648	4,393	1,487	752	588	789	599	512	349		
3732	Boat building and repairing.....	(d)	(d)	(d)	(d)	702	615	621	588	409	261		
3741	Locomotives and parts.....	11,068	3,408	49,843	20,185	6,324	4,299	1,529	1,393			2,145	3,032
3742	Railroad and street cars.....	120,017	13,848	124,576	32,952	1,529	911	2,085	1,409	3,623	2,426	59	93
3761	Motorcycles and bicycles.....	4,159	963	1,029	221	682	611	63	50	38	20	862	1,021
	Miscellaneous manufactures.....	13,935	3,637	7,060	2,211	31,483	20,160	2,283	2,408	3,403	2,245	2,945	3,415
3821	Mechanical measuring instruments.....	13,307	3,413	7,060	2,211	12,511	7,820	2,260	2,381	652	364	1,956	2,059
3861	Photographic equipment.....	628	224			1,337	722	23	27	870	585	989	1,356
3904	Needles, pins and fasteners.....	(d)	(d)			17,635	11,618			1,881	1,296		

NOTE: The sums shown for each of the steel mill shapes on the line "Metal producing and fabricating industries" are the totals of the individual industry figures listed below, e.g., when figures for "plates" were combined with "all other carbon steel mill shapes and forms" they were omitted from the total for "plates" and were included in the total for "all other carbon steel mill shapes and forms". The effect on the total for each mill shape is very small.

n.a.—Not available.

^d Withheld to avoid disclosing figures for individual companies.

^{*} This figure includes data for other steel mill shapes as indicated by other footnotes on this industry line.

¹ "Primary metal industries" as used in this table, include those industries that produce the metal shapes and forms which the fabricating industries consume. The data shown for the establishments (rolling mills, pipe mills, and drawing mills) in the primary metal industries include only the consumption of mill shapes and forms in the production of fabricated products or in maintenance and repair work. Since billets and bars are included as steel mill shapes the consumption of forgings was excluded from the metals consumed inquiry to avoid duplication by counting both the forgings and the bars or billets from which the forgings were made. For this table, therefore, producers of forgings are considered as metal fabricators, even though they are classified in Major Group 33, Primary Metal Industries.

² "Metal fabricating industries" include establishments whose primary activity is the manufacture of products fabricated beyond the metal mill or foundry level.

³ Combined with all other carbon steel mill shapes and forms to avoid disclosing figures for individual companies.

⁴ Includes tin plate, terne plate, and black plate, which amounted to 3,062,455 tons valued at \$351,013,000 for the Tin Cans and Other Tinware Industry and 341,634 tons valued at \$36,708,000 for the Metal Stampings Industry.

⁵ Combined with carbon steel bars and bar shapes to avoid disclosing figures for individual companies.

⁶ Combined with all other alloy steel mill shapes and forms to avoid disclosing figures for individual companies.

⁷ Combined with stainless steel to avoid disclosing figures for individual companies.

⁸ Combined with alloy steel bars and bar shapes to avoid disclosing figures for individual companies.

⁹ Combined with carbon steel sheet and strip to avoid disclosing figures for individual companies.

¹⁰ Data not collected.

¹¹ Data not collected separately; included with "all other carbon steel mill shapes and forms".

¹² Includes carbon steel bars and bar shapes, structural shapes, plates, and wire.

¹³ Includes carbon steel bars and bar shapes, sheet and strip, structural shapes, plates, and wire.

¹⁴ Data not collected separately; included with "all other alloy steel mill shapes and forms".

¹⁵ Includes alloy steel bars and bar shapes.

¹⁶ The total consumption by establishments classified in the metal-fabricating industries amounted to 873,816 tons valued at \$560,173,000. In addition, nonferrous metal mills and wire drawing establishments produced and consumed in the same establishment 400,780 tons of brass and wire mill shapes and forms.

¹⁷ The consumption by establishments classified in the metal-fabricating industries amounted to 360,183 tons valued at \$203,668,000. In addition, nonferrous metal mills and wire drawing establishments produced and consumed 24,323 tons of aluminum mill shapes and forms.

CENSUS OF MANUFACTURES: 1947

TABLE 12.—CONSUMPTION OF SELECTED METAL SHAPES

[Money figures in

DIVISION AND STATE	Steel mill shapes and forms										
	Total, all estab- lishments (tons)	Metal fabricating establishments									
		Total		Carbon steel							
				Bars and shapes		Sheet and strip		Structural shapes		Plates	
		Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value
United States.....	43,146,846	39,383,669	\$3,799,438	5,728,608	\$482,990	15,687,915	\$1,442,573	3,429,007	\$244,564	4,596,336	\$351,914
New England.....	1,484,635	1,408,561	194,631	273,175	30,509	494,171	62,836	74,509	6,479	99,594	8,595
Maine.....	70,968	70,968	7,706	12,065	1,087	4,421	560	3,315	374	6,778	553
New Hampshire.....	32,332	32,332	3,922	4,760	620	14,867	1,868	(d)	(d)	3,144	270
Vermont.....	18,433	18,433	2,421	5,599	603	3,336	378	3,727	269	2,032	150
Massachusetts.....	764,488	713,297	97,084	141,755	13,858	239,357	30,134	41,418	3,656	63,673	5,630
Rhode Island.....	64,321	64,321	7,799	22,939	2,622	8,699	1,007	(d)	(d)	4,336	390
Connecticut.....	534,683	503,210	75,699	86,067	11,719	223,491	29,029	16,280	1,452	19,731	1,602
Middle Atlantic.....	10,206,762	8,840,079	820,247	1,109,556	90,239	2,646,177	236,688	1,336,688	87,145	1,624,283	120,355
New York.....	2,257,384	2,109,010	211,503	326,531	25,666	833,794	80,059	225,664	16,477	223,773	18,758
New Jersey.....	1,148,412	1,130,845	123,326	127,773	11,286	278,849	26,508	146,691	10,383	127,588	10,609
Pennsylvania.....	6,800,966	5,600,224	485,418	655,252	50,287	1,633,634	130,121	964,333	60,285	1,272,922	90,988
East North Central.....	22,060,892	20,959,568	1,985,936	3,381,911	280,392	10,157,080	918,486	952,533	68,502	1,483,106	112,124
Ohio.....	5,357,683	5,098,465	483,618	774,169	64,553	2,589,328	230,562	251,031	19,069	438,326	33,721
Indiana.....	2,475,041	2,286,247	208,485	356,404	28,738	831,798	76,185	163,648	10,155	251,242	17,408
Illinois.....	6,692,039	4,986,162	477,280	929,118	73,697	1,426,310	137,692	318,273	22,293	443,033	32,774
Michigan.....	8,636,220	6,700,244	646,195	1,023,299	86,653	4,366,442	395,354	127,706	9,866	201,218	16,387
Wisconsin.....		1,858,400	109,458	298,921	26,851	943,202	78,663	91,975	7,019	149,287	11,834
West North Central.....	2,115,249	1,811,288	175,044	283,262	25,440	746,818	71,725	237,877	17,819	215,851	16,887
Minnesota.....		399,843	36,871	73,986	6,704	165,702	13,421	40,922	3,539	38,430	3,037
Iowa.....	350,569	350,569	34,343	79,622	7,874	144,176	15,249	47,417	3,452	65,245	4,224
Missouri.....	(d)	707,017	78,640	75,230	6,787	340,268	33,819	94,038	6,994	75,692	5,841
North Dakota.....	4,162	4,162	340	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
South Dakota.....	8,375	8,375	785	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Nebraska.....	112,281	112,281	10,129	32,988	2,722	35,821	3,395	15,570	1,103	15,588	1,102
Kansas.....	139,041	139,041	13,936	20,545	1,773	50,142	5,362	29,819	2,426	29,677	2,579
South Atlantic.....	2,042,171	1,817,477	169,320	129,321	11,095	548,149	44,315	203,836	15,795	196,990	14,876
Delaware.....	(d)	25,770	2,681	1,375	115	5,111	431	1,174	107	3,050	276
Maryland.....	(d)	666,016	65,670	28,406	2,342	94,839	7,418	35,972	2,529	56,654	3,994
District of Columbia.....	1,164	1,164	110	419	48	(d)	(d)	(d)	(d)	(d)	(d)
Virginia.....	(d)	193,869	16,774	33,245	2,535	17,922	1,556	67,203	4,928	57,182	4,303
West Virginia.....	569,310	563,797	44,563	25,190	1,989	347,850	25,962	30,037	1,999	34,884	2,367
North Carolina.....	79,773	70,773	8,543	12,616	1,654	16,575	1,829	34,803	2,839	8,552	679
South Carolina.....	16,620	16,620	1,880	1,591	160	4,583	359	(d)	(d)	(d)	(d)
Georgia.....	(d)	126,030	12,930	19,822	1,638	(d)	(d)	19,147	1,973	7,494	1,401
Florida.....	144,438	144,438	17,169	6,567	626	15,817	1,576	8,122	762	16,594	1,621
East South Central.....	1,446,853	1,171,310	96,212	172,021	12,346	324,240	29,175	185,791	12,748	379,803	27,613
Kentucky.....	(d)	201,294	19,371	38,985	2,945	94,170	8,668	10,510	788	14,126	1,265
Tennessee.....	250,630	250,630	24,039	29,579	2,224	94,400	10,051	38,772	2,887	45,673	3,656
Alabama.....	(d)	463,284	34,011	88,834	5,883	73,689	6,080	106,403	6,966	168,710	13,024
Mississippi.....	256,102	256,102	17,891	16,623	1,294	61,981	4,376	30,106	2,107	142,394	9,668
West South Central.....	1,240,630	1,187,643	118,984	140,126	12,237	309,191	29,906	188,687	15,853	244,405	22,939
Arkansas.....	16,396	16,396	1,769	2,406	224	5,054	478	3,113	350	573	59
Louisiana.....	217,115	217,115	19,813	10,412	964	89,056	7,344	23,712	1,835	45,064	4,153
Oklahoma.....	(d)	198,648	19,788	26,009	2,539	30,328	3,178	47,710	3,974	65,496	6,138
Texas.....	(d)	755,484	77,614	101,299	8,610	184,753	18,906	114,152	9,694	133,273	12,589
Mountain.....	349,943	172,023	17,442	40,478	3,554	30,488	3,177	26,914	2,643	38,005	3,166
Montana.....	6,954	6,954	738	(d)	(d)	3,587	379	(d)	(d)	1,769	166
Idaho.....	4,754	4,754	411	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Wyoming.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Colorado.....	(d)	80,005	7,508	26,588	2,259	20,698	2,051	8,033	767	16,677	1,461
New Mexico.....	1,905	1,905	180	(d)	(d)	(d)	(d)	(d)	(d)	567	58
Arizona.....	(d)	17,286	1,768	(d)	(d)	(d)	(d)	7,519	625	(d)	(d)
Utah.....	55,628	55,628	6,283	5,851	611	3,026	342	7,943	892	12,086	921
Nevada.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Pacific.....	2,199,711	2,015,120	221,622	198,758	17,178	431,601	46,265	222,172	17,580	323,299	25,359
Washington.....	(d)	186,787	20,925	18,234	1,178	28,006	3,067	20,607	1,556	23,758	1,946
Oregon.....	(d)	130,486	13,384	16,921	1,258	22,131	2,192	12,674	1,007	35,049	2,910
California.....	(d)	1,697,847	187,313	164,603	14,742	381,464	41,006	188,891	15,017	264,492	20,603

See footnotes at end of table.

AND FORMS, BY DIVISIONS AND STATES: 1947

(thousands of dollars)

Steel mill shapes and forms—Continued												DIVISION AND STATE
Metal fabricating establishments—Continued										Metal producing establishments		
Carbon steel—Continued				Alloy steel				Stainless steel		Carbon steel wire (tons)	All other steel mill shapes and forms—carbon, alloy and stainless (tons)	
Wire		All other mill shapes and forms		Bars and bar shapes		All other mill shapes and forms						
Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value			
1,756,704	\$195,510	5,510,703	\$600,923	1,673,154	\$202,634	802,791	\$120,884	197,851	\$157,446	2,084,987	1,678,790	United States
181,554	26,884	136,302	16,158	75,586	17,847	61,354	14,774	12,316	10,549	71,929	4,145	New England
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Maine
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	New Hampshire
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Vermont
82,879	13,441	75,823	9,511	24,647	6,637	36,807	7,946	7,038	6,271	(d)	(d)	Massachusetts
15,517	1,691	(d)	(d)	2,438	743	196	96	488	361	(d)	(d)	Rhode Island
79,688	11,419	13,193	1,321	42,661	9,173	23,913	6,501	4,306	3,483	(d)	(d)	Connecticut
331,018	37,440	1,305,984	143,436	243,815	29,111	191,580	32,516	50,978	43,317	589,626	777,057	Middle Atlantic
60,364	6,619	326,897	33,876	68,210	8,416	28,203	5,292	15,574	13,340	(d)	(d)	New York
68,205	9,497	318,730	37,487	31,505	3,804	20,856	4,623	10,648	9,129	(d)	(d)	New Jersey
202,449	21,324	660,357	72,073	144,100	16,891	142,521	22,601	24,756	20,848	523,016	677,726	Pennsylvania
984,229	100,579	2,236,387	227,667	1,177,951	133,159	475,304	62,209	111,067	82,818	780,868	320,456	East North Central
330,776	29,189	353,654	38,101	191,332	26,073	137,115	16,741	32,734	25,479	92,482	166,636	Ohio
79,277	7,867	248,889	25,105	222,026	21,485	89,536	13,450	13,577	9,092	(d)	(d)	Indiana
292,420	31,704	1,202,117	128,466	170,105	19,067	128,619	18,303	16,167	13,384	543,029	62,848	Illinois
245,164	28,557	163,592	16,809	543,972	60,846	52,225	8,938	36,626	24,685	(d)	(d)	Michigan
36,592	3,262	208,135	19,186	50,516	5,688	67,809	6,777	11,963	10,178	(d)	(d)	Wisconsin
81,964	9,699	179,678	20,873	29,373	3,397	30,671	3,985	5,794	5,219	196,737	107,224	West North Central
20,123	1,900	41,946	5,366	6,905	760	4,014	696	1,815	1,448	(d)	(d)	Minnesota
7,200	729	9,734	1,235	3,772	536	2,115	290	1,288	1,254	(d)	(d)	Iowa
48,287	6,380	116,884	12,684	17,594	1,833	20,966	2,309	2,158	1,093	(d)	(d)	Missouri
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	North Dakota
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	South Dakota
4,907	529	3,843	776	(d)	(d)	3,038	336	(d)	(d)	(d)	(d)	Nebraska
1,447	161	5,795	661	(d)	(d)	538	354	(d)	(d)	(d)	(d)	Kansas
53,403	5,984	670,325	73,002	6,694	921	6,372	817	2,387	2,515	16,127	208,567	South Atlantic
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Delaware
37,351	3,598	409,541	44,109	1,186	288	771	188	1,206	1,204	(d)	(d)	Maryland
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	District of Columbia
6,857	1,133	10,050	966	253	29	(d)	(d)	(d)	(d)	(d)	(d)	Virginia
2,430	199	117,513	11,514	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	West Virginia
4,974	713	(d)	(d)	(d)	(d)	257	54	(d)	250	(d)	(d)	North Carolina
468	88	(d)	(d)	230	48	(d)	(d)	(d)	(d)	(d)	(d)	South Carolina
579	145	19,561	2,069	(d)	(d)	2,720	224	(d)	177	(d)	(d)	Georgia
744	108	96,434	12,413	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Florida
36,313	3,185	71,536	8,969	5,736	590	3,389	422	1,481	1,164	(d)	(d)	East South Central
4,285	422	35,333	4,182	(d)	(d)	(d)	(d)	563	482	(d)	(d)	Kentucky
8,422	992	30,649	4,297	1,477	131	940	106	818	595	(d)	(d)	Tennessee
23,606	1,771	(d)	(d)	(d)	(d)	(d)	(d)	100	87	(d)	(d)	Alabama
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Mississippi
16,308	1,878	205,200	22,602	75,313	9,747	4,555	895	3,858	2,927	(d)	(d)	West South Central
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Arkansas
366	41	48,017	5,365	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Louisiana
2,268	315	(d)	(d)	10,563	1,607	(d)	(d)	141	123	(d)	(d)	Oklahoma
13,674	1,522	136,799	14,889	63,687	7,974	(d)	(d)	(d)	(d)	(d)	(d)	Texas
3,107	536	28,051	3,502	2,602	356	2,106	291	272	217	(d)	(d)	Mountain
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Montana
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Idaho
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Wyoming
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Colorado
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	New Mexico
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Arizona
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Utah
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Nevada
68,808	9,325	677,240	84,714	56,084	7,506	27,460	4,975	9,698	8,720	(d)	(d)	Pacific
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Washington
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Oregon
61,441	8,166	551,087	68,723	51,062	6,595	25,857	4,580	8,950	7,981	(d)	(d)	California

TABLE 12.—CONSUMPTION OF SELECTED METAL SHAPES

DIVISION AND STATE	Iron castings, rough and semifinished			Steel castings, rough and semifinished			Copper and copper-base alloy		
	Purchased by metal-fabricating establishments ¹		Produced and consumed in the same establishment ²	Purchased by metal-fabricating establishments ¹		Produced and consumed in the same establishment ²	Brass and wire mill shapes and forms		Metal producing establishments
	Tons	Value		Tons	Value		Tons	Value	
United States	4,237,868	\$898,240	13,416,263	793,796	\$245,185	199,249	873,816	\$560,173	400,780
New England	223,192	57,884	167,622	17,392	7,651	7,853	154,131	95,284	47,287
Maine.....	22,966	5,836	18,908	502	219		180	93	
New Hampshire.....	5,833	1,776	1,423	2,189	772	(d)	1,309	900	
Vermont.....	6,492	1,967	5,543	344	116		507	289	
Massachusetts.....	93,217	24,345	96,383	8,919	4,257	(d)	45,131	20,023	26,641
Rhode Island.....	33,644	7,406	20,289	507	177		21,966	13,477	(d)
Connecticut.....	61,040	16,555	25,076	4,931	2,110	(d)	85,038	51,502	(d)
Middle Atlantic	637,133	144,984	740,198	167,353	59,376	96,748	283,556	182,382	132,357
New York.....	318,892	67,319	197,440	23,677	8,518	5,638	126,290	88,987	60,249
New Jersey.....	114,817	29,963	89,773	19,840	8,712	1,924	88,070	48,643	28,489
Pennsylvania.....	203,424	47,702	452,985	123,836	42,146	89,191	69,196	44,752	37,619
East North Central	2,896,078	610,137	1,807,358	71,220	137,883	58,164	363,903	233,030	198,272
Ohio.....	549,578	122,605	261,406	133,210	41,189	18,179	96,237	66,258	18,366
Indiana.....	243,872	50,815	197,084	47,504	13,422	7,029	56,464	37,813	86,664
Illinois.....	536,020	107,293	725,612	125,076	38,167	16,864	84,859	54,577	59,020
Michigan.....	1,284,315	264,950	427,277	104,065	24,557	1,164	93,792	52,241	32,754
Wisconsin.....	282,293	64,474	195,989	61,365	20,548	16,928	32,451	22,141	1,462
West North Central	266,640	44,268	200,120	38,000	8,284	12,416	36,338	25,867	
Minnesota.....	37,955	7,957	42,935	4,811	1,448	5,738	5,610	4,141	
Iowa.....	145,529	21,603	119,532	23,720	4,262	(d)	(d)	(d)	
Missouri.....	65,682	11,304	14,989	7,792	2,088	(d)	27,662	10,077	
North Dakota.....	(d)	(d)	(d)	(d)	(d)		(d)	(d)	
South Dakota.....	(d)	(d)	(d)	(d)	(d)		(d)	(d)	
Nebraska.....	(d)	(d)	(d)	(d)	(d)		(d)	(d)	
Kansas.....	11,716	2,139	12,619	(d)	(d)	(d)	1,416	972	
South Atlantic	52,292	9,572	114,740	12,005	3,826	8,594	6,144	4,484	(d)
Delaware.....	1,104	216	5,829	(d)	(d)	31	938	529	
Maryland.....	8,401	2,393	69,040	6,335	2,048	(d)	1,888	1,394	(d)
District of Columbia.....	(d)	(d)	(d)	(d)	(d)		(d)	(d)	
Virginia.....	3,408	752	6,349	2,090	648	(d)	(d)	(d)	
West Virginia.....	8,003	2,079	(d)	1,625	544	(d)	829	632	
North Carolina.....	6,590	1,196	6,258	(d)	(d)		331	206	
South Carolina.....	1,435	323	(d)	(d)	(d)	(d)	(d)	(d)	
Georgia.....	15,806	2,338	23,062	1,362	365	(d)	2,058	1,647	
Florida.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	
East South Central	66,821	9,007	251,460	27,196	6,327	4,926	4,601	2,922	(d)
Kentucky.....	29,083	4,416	82,246	551	169		2,624	1,743	
Tennessee.....	14,186	2,481	93,539	1,020	469	(d)	1,683	1,012	(d)
Alabama.....	23,344	2,064	(d)	25,825	5,699	(d)	294	167	
Mississippi.....	208	46	(d)	(d)	(d)		(d)	(d)	
West South Central	31,186	6,076	24,527	20,726	7,588	(d)	2,540	1,795	
Arkansas.....	857	225	(d)	(d)	(d)	(d)	(d)	(d)	
Louisiana.....	1,704	357	(d)	(d)	(d)	(d)	(d)	(d)	
Oklahoma.....	7,673	1,620	4,402	(d)	(d)	(d)	(d)	(d)	
Texas.....	20,952	3,864	19,237	15,578	6,021	1,912	1,627	1,097	
Mountain	4,082	768	51,555	6,265	1,662	(d)	902	1,075	(d)
Montana.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	
Idaho.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	
Wyoming.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	
Colorado.....	3,791	717	11,172	2,882	908	(d)	(d)	(d)	
New Mexico.....			(d)	(d)	(d)	(d)	(d)	(d)	
Arizona.....			(d)	(d)	(d)	(d)	(d)	(d)	
Utah.....			(d)	(d)	(d)	(d)	(d)	(d)	
Nevada.....			(d)	(d)	(d)	(d)	(d)	(d)	
Pacific	60,444	15,543	58,673	33,699	12,588	6,334	21,801	13,334	(d)
Washington.....	4,889	1,188	(d)	2,848	1,083	2,509	(d)	(d)	
Oregon.....	6,645	1,113	(d)	3,460	1,260	(d)	(d)	(d)	
California.....	60,210	13,242	55,376	27,391	10,255	3,825	21,368	12,839	(d)

NOTE: The totals shown in this table for steel mill shapes and forms are the same as those shown for metals consumed by industry (table 11), that is, the same combinations or exclusions have been made for this table. For example, when steel plate for a particular industry was combined with all other carbon steel mill shapes to avoid disclosing figures for an individual company, similar adjustments were made in the State table. For the furniture and fixture industries, only carbon steel sheet and strip were collected separately. All other carbon steel mill shapes were collected together, alloy steel mill shapes were obtained in total only. The effect on the total for each steel mill shape is very small. For castings and aluminum mill shapes the totals in this State table exceed the totals in the industry table (table 11) by the amount of the disclosures. The two digit totals in the industry table exclude the amounts withheld because of disclosure. For copper and copper-base alloy mill shapes only one industry was a disclosure. The totals in this State table, therefore, exclude the amounts represented by this industry to avoid disclosing figures for individual companies. The resulting understatement is negligible.

As used in the columnar headings of this table, the term "metal producing establishments" includes rolling mills, pipe mills, and wire drawing plants. The data shown for metal producing establishments include only mill shapes used in the production of fabricated products or in maintenance and repair work. "Metal fabricating establishments" include establishments whose primary activity is the manufacture of products fabricated beyond the metal mill or foundry level. Since billets and bars are included as steel mill shapes the consumption of forgings was excluded from the metals consumed inquiry to avoid duplication by counting both forgings and the bars or billets from

AND FORMS, BY DIVISIONS AND STATES: 1947—Continued

thousands of dollars]

Copper and copper-base alloy—Continued			Aluminum and aluminum-base alloys						DIVISION AND STATE
Castings, rough and semifinished			Mill shapes			Castings, rough and semifinished			
Purchased by metal-fabricating establishments ¹		Produced and consumed in the same establishment ²	Metal fabricating establishments		Metal producing establishments	Purchased by metal-fabricating establishments ¹		Produced and consumed in the same establishment ²	
Tons	Value	Tons	Tons	Value	Tons	Tons	Value	Tons	
103, 144	\$83, 222	185, 137	360, 183	\$203, 667	24, 323	108, 322	\$105, 874	458, 845	United States
6, 844	6, 135	17, 585	12, 935	9, 344	436	10, 104	11, 241	1, 631	New England
(d)	(d)	482	(d)	(d)	(d)	(d)	(d)	(d)	Maine
(d)	(d)	585	(d)	(d)	(d)	(d)	(d)	(d)	New Hampshire
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Vermont
3, 141	2, 774	4, 954	5, 438	3, 979	(d)	2, 669	3, 224	1, 283	Massachusetts
644	530	(d)	208	126	(d)	(d)	(d)	(d)	Rhode Island
2, 514	2, 323	11, 020	6, 844	4, 969	(d)	7, 191	7, 740	(d)	Connecticut
27, 357	24, 941	49, 197	64, 791	41, 129	1, 699	17, 705	18, 825	4, 784	Middle Atlantic
13, 298	10, 676	12, 895	22, 709	15, 193	(d)	9, 504	10, 536	3, 338	New York
3, 735	5, 199	6, 786	8, 270	5, 052	(d)	3, 940	3, 586	881	New Jersey
10, 324	9, 066	29, 516	33, 812	20, 883	(d)	4, 261	4, 703	565	Pennsylvania
51, 184	38, 572	86, 355	117, 994	68, 702	(d)	63, 097	59, 553	26, 468	East North Central
20, 911	12, 849	37, 388	38, 003	22, 673	(d)	17, 995	16, 805	7, 209	Ohio
3, 429	2, 990	4, 954	13, 976	8, 273	(d)	5, 160	5, 856	1, 013	Indiana
12, 863	10, 558	13, 834	21, 700	13, 209	3, 851	14, 380	15, 244	2, 835	Illinois
8, 795	7, 962	18, 179	18, 431	10, 683	(d)	18, 830	14, 539	773	Michigan
5, 186	4, 213	12, 000	25, 884	13, 864	(d)	6, 732	7, 109	14, 628	Wisconsin
4, 671	3, 371	4, 874	30, 386	17, 331	(d)	9, 786	8, 072	18, 773	West North Central
1, 302	863	1, 089	11, 487	5, 928	(d)	3, 720	3, 358	209	Minnesota
1, 598	1, 171	496	6, 900	3, 790	(d)	2, 425	1, 646	6, 397	Iowa
1, 427	977	1, 746	7, 644	4, 554	(d)	3, 048	2, 491	12, 085	Missouri
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	North Dakota
166	173	(d)	(d)	(d)	(d)	(d)	(d)	(d)	South Dakota
178	187	(d)	2, 679	2, 010	(d)	517	538	(d)	Nebraska
2, 048	1, 503	5, 886	18, 730	10, 323	(d)	1, 225	1, 383	40	Kansas
(d)	(d)	688	(d)	(d)	(d)	(d)	(d)	(d)	South Atlantic
856	649	1, 058	4, 996	3, 455	(d)	(d)	(d)	(d)	Delaware
(d)	(d)	(d)	213	147	(d)	104	163	(d)	Maryland
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	District of Columbia
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Virginia
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	West Virginia
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	North Carolina
153	100	330	6, 460	3, 226	(d)	(d)	(d)	(d)	South Carolina
(d)	(d)	(d)	3, 166	1, 777	(d)	(d)	(d)	(d)	Georgia
(d)	(d)	(d)	(d)	(d)	(d)	174	116	(d)	Florida
1, 967	1, 434	14, 836	74, 356	27, 835	(d)	370	381	91	East South Central
790	548	10, 751	28, 246	10, 462	(d)	(d)	(d)	(d)	Kentucky
152	120	1, 389	2, 406	1, 435	(d)	(d)	(d)	(d)	Tennessee
1, 025	766	2, 696	43, 704	15, 938	(d)	143	135	87	Alabama
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Mississippi
1, 475	990	703	9, 675	6, 254	(d)	898	838	(d)	West South Central
(d)	(d)	(d)	153	81	(d)	(d)	(d)	(d)	Arkansas
(d)	(d)	(d)	394	231	(d)	(d)	(d)	(d)	Louisiana
(d)	(d)	(d)	1, 171	789	(d)	(d)	(d)	(d)	Oklahoma
990	635	342	7, 957	5, 153	(d)	629	540	(d)	Texas
325	236	33	1, 325	967	(d)	221	57	(d)	Mountain
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Montana
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Idaho
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Wyoming
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Colorado
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	New Mexico
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Arizona
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Utah
(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	Nevada
7, 273	6, 040	5, 668	29, 991	21, 763	(d)	4, 916	5, 524	7, 004	Pacific
(d)	(d)	(d)	4, 615	3, 257	(d)	(d)	(d)	(d)	Washington
(d)	(d)	(d)	1, 022	616	(d)	(d)	(d)	(d)	Oregon
6, 908	5, 571	5, 575	24, 354	17, 890	(d)	4, 656	5, 163	6, 711	California

which the forgings were made. For this table, therefore, producers of forgings are considered as metal fabricators, even though they are classified in Major Group 33, Primary Metal Industries.

¹ Withheld to avoid disclosing figures for individual companies. Not all cells in which a ^d appears are a disclosure, but had to be treated in the same way to protect another cell from being disclosed by subtraction.

² "Purchased" includes castings transferred from other establishments of the same company as well as castings purchased from other companies.

³ Includes both metal fabricators and metal producers.

⁴ Data on castings produced and consumed in the same establishment are shown in Industry Pamphlets MC33A and MC33C. The data shown in those pamphlets are estimates. While it was feasible to make such estimates on a total basis, sufficient information was not available to make reliable estimates by States. The data shown by States are, therefore, not "blown up" and represent 91 percent of the estimated total of iron castings produced and consumed in the same establishment, 94 percent of the estimated total of steel castings, 90 percent of the estimated total of copper and copper-base alloy castings, and 97 percent of the estimated total for aluminum and aluminum-base alloy castings produced and consumed in the same establishment.

TABLE 13.—COPPER AND COPPER-BASE ALLOYS AND ALUMINUM AND ALUMINUM-BASE ALLOYS—REFINERY SHAPES AND SCRAP CONSUMED, BY INDUSTRY: 1947

(Money figures in thousands of dollars)

CONSUMING INDUSTRY		Copper and copper-base alloys				Aluminum and aluminum-base alloys			
		Refinery shapes		Scrap		Refinery shapes		Scrap ¹	
No.	Title	Tons	Value	Tons	Value	Tons	Value	Tons	Value
	Primary metal industries, total.....	1,798,921	n.a.	1,226,742	n.a.	1,002,305	n.a.	471,517	n.a.
3331	Primary copper, total.....	n.a.		276,632					
	Company-owned material.....	n.a.	n.a.	43,960	\$10,743				
	Materials processed on a toll basis.....	n.a.		232,942					
3341	Secondary nonferrous metals, total.....	18,679		390,420		97,323		386,572	
	Company-owned material.....	12,431	\$4,921	377,950	97,104	92,148	\$26,001	294,480	\$50,662
	Materials processed on a toll basis.....	6,248		12,470		5,175		92,092	
3351	Copper rolling and drawing, total.....	1,495,435		383,480		8,699			
	Company-owned material.....	1,229,219	517,620	375,602	120,114	8,699	2,748		
	Materials processed on a toll basis.....	266,216		7,887					
3352	Aluminum rolling and drawing, total.....	815	269			673,125	187,649	72,767	14,884
3361	Nonferrous foundries (including "captive" foundries).....	240,314	93,910	162,656	50,989	209,995	63,237	11,054	2,673
3321	Gray iron foundries (including "captive" foundries).....	37,402	15,268	9,714	2,447	12,401	3,595	872	189
3322	Malleable iron foundries (including "captive" foundries).....	3,936	1,498	3,185	818	487	156	250	74
3323	Steel foundries (including "captive" foundries).....	2,340	1,005	376	111	275	86	2	(²)

NOTE: "Captive foundries" are foundries that are parts of establishments classified outside the foundry industries. These establishments have been classified in an industry based on their final product and the "captive foundry" department is classified as nonferrous, gray iron, malleable, or steel based on the principal kind of casting made in the foundry.

n.a.—Not available.

¹ There was a negligible amount of aluminum scrap consumed by primary aluminum refineries. Less than one-half of one percent of the total production of aluminum in the primary plants was produced from such scrap.

² Less than \$1,000.

TABLE 14.—ALUMINUM AND ALUMINUM-BASE AND COPPER AND COPPER-BASE ALLOYS—REFINERY SHAPES AND SCRAP CONSUMED, BY DIVISIONS AND STATES: 1947

(Money figures in thousands of dollars)

DIVISION AND STATE	Copper and copper-base alloy				Aluminum and aluminum-base alloy			
	Refinery shapes (company-owned material only)		Scrap (company-owned material only)		Refinery shapes (company-owned material only)		Scrap (company-owned material only)	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
United States, total.....	1,526,457	\$634,491	973,443	\$282,326	997,130	\$283,472	379,425	\$68,482
New England.....	281,288	118,483	183,369	58,606	16,149	4,865	8,537	1,717
Maine.....	556	229	(^d)	(^d)	15	5	12	4
New Hampshire.....	967	378	(^d)	(^d)	28	8		
Vermont.....	238	91	(^d)	(^d)	12	4		
Massachusetts.....	22,721	8,859	22,793	6,895	3,853	1,188	529	69
Rhode Island.....	36,409	15,464	28	5	92	31	15	3
Connecticut.....	220,397	93,462	160,100	51,561	12,149	3,629	7,981	1,641
Middle Atlantic.....	643,576	268,339	263,686	71,299	175,876	52,065	61,932	12,685
New York.....	260,600	109,021	97,103	27,276	86,461	24,590	24,033	4,256
New Jersey.....	299,088	126,463	44,721	13,654	35,091	10,036	14,966	3,045
Pennsylvania.....	83,888	33,455	121,862	30,369	54,324	17,439	22,933	5,384
East North Central.....	410,254	170,504	404,515	116,763	317,089	90,047	208,734	37,546
Ohio.....	90,064	37,487	43,669	11,729	79,240	23,289	88,255	14,671
Indiana.....	79,950	33,924	27,031	8,053	54,878	17,428	35,902	7,670
Illinois.....	89,145	35,823	172,452	46,857	111,815	28,354	50,678	8,665
Michigan.....	103,747	43,383	138,300	42,589	44,076	13,173	28,706	5,050
Wisconsin.....	47,348	19,887	23,063	7,535	27,080	7,803	5,293	1,490
West North Central.....	41,275	17,034	40,065	13,305	24,766	7,612	11,335	1,869
Minnesota.....	3,806	1,479	4,209	1,387	2,770	765	261	51
Iowa.....	2,109	961	163	58	6,914	1,893	(^d)	(^d)
Missouri.....	34,780	14,346	27,846	9,285	14,707	4,830	324	68
North Dakota.....								
South Dakota.....								
Nebraska.....	153	63	1,837	474	(^d)	(^d)	(^d)	(^d)
Kansas.....	427	185	6,030	2,101	(^d)	(^d)	10,627	1,715
South Atlantic.....	36,832	13,006	14,124	3,977	13,511	3,753	3,322	543
Delaware.....	413	147	399	115	(^d)	(^d)	(^d)	(^d)
Maryland.....	32,473	11,407	6,064	1,202	5,172	1,411	2,906	467
District of Columbia.....								
Virginia.....	496	204	5,944	2,056	(^d)	(^d)	54	6
West Virginia.....	(^d)	(^d)	191	40	8,076	2,262	(^d)	(^d)
North Carolina.....	(^d)	(^d)	31	10	97	34	3	
South Carolina.....			(^d)	(^d)			(^d)	(^d)
Georgia.....	461	175	1,457	539	93	27	52	10
Florida.....	75	29	(^d)	(^d)	50	10	56	13

See footnote at end of table.

MATERIALS CONSUMED

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**TABLE 14.—ALUMINUM AND ALUMINUM-BASE AND COPPER AND COPPER-BASE ALLOYS—
REFINERY SHAPES AND SCRAP CONSUMED, BY DIVISIONS AND STATES: 1947—Continued**

DIVISION AND STATE	Copper and copper-base alloy				Aluminum and aluminum-base alloy			
	Refinery shapes (company-owned material only)		Scrap (company-owned material only)		Refinery shapes (company-owned material only)		Scrap (company-owned material only)	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
East South Central	12,483	\$4,404	14,572	\$3,231	298,327	\$81,775	51,762	\$7,612
Kentucky.....	6,434	2,063	(d)	(d)	(d)	(d)	(d)	(d)
Tennessee.....	(d)	(d)	5,431	905	208,071	56,243	31,842	5,585
Alabama.....	4,604	1,740	6,606	1,741	82,934	23,498	(d)	(d)
Mississippi.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
West South Central	2,801	1,272	11,623	2,082	872	267	81	18
Arkansas.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Louisiana.....	(d)	(d)	74	24	(d)	(d)	(d)	(d)
Oklahoma.....	687	334	82	25	578	163	(d)	(d)
Texas.....	1,812	829	11,467	2,033	279	100	75	17
Mountain	67,719	28,713	4,841	1,803	7,220	1,684	431	117
Montana.....	(d)	(d)	200	63	(d)	(d)	(d)	(d)
Idaho.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Wyoming.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Colorado.....	303	139	4,388	1,702	327	95	43	15
New Mexico.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Arizona.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Utah.....	20	15	(d)	(d)	(d)	(d)	(d)	(d)
Nevada.....	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Pacific	30,229	12,136	36,628	11,260	143,320	41,404	33,291	6,375
Washington.....	442	170	533	121	112,352	31,738	(d)	(d)
Oregon.....	368	155	2,357	922	546	179	(d)	(d)
California.....	20,419	11,811	33,738	10,217	30,422	9,487	27,595	5,069

NOTE: The data shown are for company-owned material only. In addition these refinery shapes and scrap were processed on a toll basis as follows: Copper and copper-base alloy refinery shapes—total 272,464 tons; New England, 26,465 tons; Middle Atlantic, 182,795 tons (New York, 110,576); East North Central, 30,589 tons; Copper and copper-base alloy scrap—total, 253,299 tons; New England, 7,775 tons; Middle Atlantic, 210,771 tons; East North Central, 8,085 tons; Aluminum and aluminum-base alloy refinery shapes; total 5,175 tons; Aluminum and aluminum-base alloy scrap, total 92,092 tons.

^a Withheld to avoid disclosing figures for individual companies.